

Sequence Listing



*NEW
Seq. list
for Amalika*

<110> Innogenetics N.V.

<120> Purified hepatitis C virus envelope proteins for diagnostic and therapeutic use.

<130> 2551-68

<140> 09/995,791

<160> 122

<170> PatentIn 3.1

<210> 1

<211> 21

<212> DNA

<213> Hepatitis C virus

<400> 1

ggcatgcaag cttaattaat t

21

<210> 2

<211> 68

<212> DNA

<213> Hepatitis C virus

<400> 2

ccggggaggc ctgcacgtga tcgagggcag acaccatcac caccatcact aatagttaat

60

taactgca

68

<210> 3

<211> 642

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..639

<220>

<221> mat_peptide

<222> 1..636

<400> 3

atg ccc ggt tgc tct ttc tct atc ttc ctc ttg gct tta ctg tcc tgt

48

Met	Pro	Gly	Cys	Ser	Phe	Ser	Ile	Phe	Leu	Leu	Ala	Leu	Leu	Ser	Cys			
1				5					10					15				
ctg	acc	att	cca	gct	tcc	gct	tat	gag	gtg	cgc	aac	gtg	tcc	ggg	atg		96	
Leu	Thr	Ile	Pro	Ala	Ser	Ala	Tyr	Glu	Val	Arg	Asn	Val	Ser	Gly	Met			
			20					25					30					
tac	cat	gtc	acg	aac	gac	tgc	tcc	aac	tca	agc	att	gtg	tat	gag	gca		144	
Tyr	His	Val	Thr	Asn	Asp	Cys	Ser	Asn	Ser	Ser	Ile	Val	Tyr	Glu	Ala			
			35				40					45						
gcg	gac	atg	atc	atg	cac	acc	ccc	ggg	tgc	gtg	ccc	tgc	gtt	cgg	gag		192	
Ala	Asp	Met	Ile	Met	His	Thr	Pro	Gly	Cys	Val	Pro	Cys	Val	Arg	Glu			
	50					55					60							
aac	aac	tct	tcc	cgc	tgc	tgg	gta	gcg	ctc	acc	ccc	acg	ctc	gca	gct		240	
Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	Ala	Leu	Thr	Pro	Thr	Leu	Ala	Ala			
	65				70				75						80			
agg	aac	gcc	agc	gtc	ccc	acc	acg	aca	ata	cga	cgc	cac	gtc	gat	ttg		288	
Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	Thr	Ile	Arg	Arg	His	Val	Asp	Leu			
				85					90					95				
ctc	gtt	ggg	gcg	gct	gct	ctc	tgt	tcc	gct	atg	tac	gtg	ggg	gat	ctc		336	
Leu	Val	Gly	Ala	Ala	Ala	Leu	Cys	Ser	Ala	Met	Tyr	Val	Gly	Asp	Leu			
			100					105					110					
tgc	gga	tct	gtc	ttc	ctc	gtc	tcc	cag	ctg	ttc	acc	atc	tcg	cct	cgc		384	
Cys	Gly	Ser	Val	Phe	Leu	Val	Ser	Gln	Leu	Phe	Thr	Ile	Ser	Pro	Arg			
		115					120					125						
cgg	cat	gag	acg	gtg	cag	gac	tgc	aac	tgc	tca	atc	tat	ccc	ggc	cac		432	
Arg	His	Glu	Thr	Val	Gln	Asp	Cys	Asn	Cys	Ser	Ile	Tyr	Pro	Gly	His			
	130					135					140							
ata	aca	ggc	cac	cgt	atg	gct	tgg	gat	atg	atg	atg	aac	tgg	tcg	cct		480	
Ile	Thr	Gly	His	Arg	Met	Ala	Trp	Asp	Met	Met	Met	Asn	Trp	Ser	Pro			
	145				150				155						160			
aca	acg	gcc	ctg	gtg	gta	tcg	cag	ctg	ctc	cgg	atc	cca	caa	gct	gtc		528	
Thr	Thr	Ala	Leu	Val	Val	Ser	Gln	Leu	Leu	Arg	Ile	Pro	Gln	Ala	Val			
				165				170						175				
gtg	gac	atg	gtg	gcg	ggg	gcc	cat	tgg	gga	gtc	ctg	gcg	ggc	ctc	gcc		576	
Val	Asp	Met	Val	Ala	Gly	Ala	His	Trp	Gly	Val	Leu	Ala	Gly	Leu	Ala			
			180					185					190					
tac	tat	tcc	atg	gtg	ggg	aac	tgg	gct	aag	gtt	ttg	att	gtg	atg	cta		624	
Tyr	Tyr	Ser	Met	Val	Gly	Asn	Trp	Ala	Lys	Val	Leu	Ile	Val	Met	Leu			
		195					200					205						
ctc	ttt	gct	ctc	taata	g												642	
Leu	Phe	Ala	Leu															
			210															

<211> 212
<212> PRT
<213> Hepatitis C virus

<400> 4

Met	Pro	Gly	Cys	Ser	Phe	Ser	Ile	Phe	Leu	Leu	Ala	Leu	Leu	Ser	Cys
1				5					10					15	
Leu	Thr	Ile	Pro	Ala	Ser	Ala	Tyr	Glu	Val	Arg	Asn	Val	Ser	Gly	Met
			20					25					30		
Tyr	His	Val	Thr	Asn	Asp	Cys	Ser	Asn	Ser	Ser	Ile	Val	Tyr	Glu	Ala
		35					40					45			
Ala	Asp	Met	Ile	Met	His	Thr	Pro	Gly	Cys	Val	Pro	Cys	Val	Arg	Glu
	50					55					60				
Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	Ala	Leu	Thr	Pro	Thr	Leu	Ala	Ala
65					70					75					80
Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	Thr	Ile	Arg	Arg	His	Val	Asp	Leu
				85					90					95	
Leu	Val	Gly	Ala	Ala	Ala	Leu	Cys	Ser	Ala	Met	Tyr	Val	Gly	Asp	Leu
			100					105					110		
Cys	Gly	Ser	Val	Phe	Leu	Val	Ser	Gln	Leu	Phe	Thr	Ile	Ser	Pro	Arg
		115					120					125			
Arg	His	Glu	Thr	Val	Gln	Asp	Cys	Asn	Cys	Ser	Ile	Tyr	Pro	Gly	His
	130					135					140				
Ile	Thr	Gly	His	Arg	Met	Ala	Trp	Asp	Met	Met	Met	Asn	Trp	Ser	Pro
145					150					155					160
Thr	Thr	Ala	Leu	Val	Val	Ser	Gln	Leu	Leu	Arg	Ile	Pro	Gln	Ala	Val
				165					170					175	
Val	Asp	Met	Val	Ala	Gly	Ala	His	Trp	Gly	Val	Leu	Ala	Gly	Leu	Ala
		180						185					190		
Tyr	Tyr	Ser	Met	Val	Gly	Asn	Trp	Ala	Lys	Val	Leu	Ile	Val	Met	Leu
		195					200					205			
Leu	Phe	Ala	Leu												
			210												

<210> 5

<211> 795
<212> DNA
<213> Hepatitis C virus

<220>
 <221> CDS
 <222> 1..792

<220>
 <221> mat_peptide
 <222> 1..789

<400> 5

atg ttg ggt aag gtc atc gat acc ctt aca tgc ggc ttc gcc gac ctc Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu 1 5 10 15	48
gtg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggc gct gcc agg Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg 20 25 30	96
gcc ctg gcg cat ggc gtc cgg gtt ctg gag gac ggc gtg aac tat gca Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala 35 40 45	144
aca ggg aat ttg ccc ggt tgc tct ttc tct atc ttc ctc ttg gct ttg Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu 50 55 60	192
ctg tcc tgt ctg acc gtt cca gct tcc gct tat gaa gtg cgc aac gtg Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val 65 70 75 80	240
tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val 85 90 95	288
tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys 100 105 110	336
gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr 115 120 125	384
ctc gca gct agg aac gcc agc gtc ccc acc acg aca ata cga cgc cac Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His 130 135 140	432
gtc gat ttg ctc gtt ggg gcg gct gct ttc tgt tcc gct atg tac gtg Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val 145 150 155 160	480
ggg gac ctc tgc gga tct gtc ttc ctc gtc tcc cag ctg ttc acc atc Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Ile 165 170 175	528
tcg cct cgc cgg cat gag acg gtg cag gac tgc aat tgc tca atc tat Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr 180 185 190	576

ccc ggc cac ata acg ggt cac cgt atg gct tgg gat atg atg atg aac	624
Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn	
195 200 205	

tgg tcg cct aca acg gcc ctg gtg gta tcg cag ctg ctc cgg atc cca	672
Trp Ser Pro Thr Thr Ala Leu Val Val Ser Gln Leu Leu Arg Ile Pro	
210 215 220	

caa gct gtc gtg gac atg gtg gcg ggg gcc cat tgg gga gtc ctg gcg	720
Gln Ala Val Val Asp Met Val Ala Gly Ala His Trp Gly Val Leu Ala	
225 230 235 240	

ggc ctc gcc tac tat tcc atg gtg ggg aac tgg gct aag gtt ttg att	768
Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn Trp Ala Lys Val Leu Ile	
245 250 255	

gtg atg cta ctc ttt gct ccc taatag	795
Val Met Leu Leu Phe Ala Pro	
260	

<210> 6

<211> 263

<212> PRT

<213> Hepatitis C virus

<400> 6

Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
1 5 10 15

Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
20 25 30

Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
35 40 45

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
50 55 60

Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
65 70 75 80

Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val
85 90 95

Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys
100 105 110

Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr
115 120 125

Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His
130 135 140

Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val
145 150 155 160

Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Ile
 165 170 175
 Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr
 180 185 190
 Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn
 195 200 205
 Trp Ser Pro Thr Thr Ala Leu Val Val Ser Gln Leu Leu Arg Ile Pro
 210 215 220
 Gln Ala Val Val Asp Met Val Ala Gly Ala His Trp Gly Val Leu Ala
 225 230 235 240
 Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn Trp Ala Lys Val Leu Ile
 245 250 255
 Val Met Leu Leu Phe Ala Pro
 260

<210> 7

<211> 633

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..630

<220>

<221> mat_peptide

<222> 1..627

<400> 7

atg ttg ggt aag gtc atc gat acc ctt acg tgc ggc ttc gcc gac ctc	48
Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu	
1 5 10 15	
atg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggt gct gcc aga	96
Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg	
20 25 30	
gcc ctg gcg cat ggc gtc cgg gtt ctg gaa gac ggc gtg aac tat gca	144
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala	
35 40 45	
aca ggg aat ttg cct ggt tgc tct ttc tct atc ttc ctc ttg gct tta	192
Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu	
50 55 60	
ctg tcc tgt ctg acc att cca gct tcc gct tat gag gtg cgc aac gtg	240
Leu Ser Cys Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val	

65	70	75	80	
tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg				288
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val	85	90	95	
tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc				336
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	100	105	110	
gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg				384
Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr	115	120	125	
ctc gca gct agg aac gcc agc gtc ccc act acg aca ata cga cgc cac				432
Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His	130	135	140	
gtc gat ttg ctc gtt ggg gcg gct gct ttc tgt tcc gct atg tac gtg				480
Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val	145	150	155	160
ggg gat ctc tgc gga tct gtc ttc ctc gtc tcc cag ctg ttc acc atc				528
Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Ile	165	170	175	
tcg cct cgc cgg cat gag acg gtg cag gac tgc aat tgc tca atc tat				576
Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr	180	185	190	
ccc ggc cac ata aca ggt cac cgt atg gct tgg gat atg atg atg aac				624
Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn	195	200	205	
tgg taatag				633
Trp				

<210> 8

<211> 209

<212> PRT

<213> Hepatitis C virus

<400> 8

Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu				
1	5	10	15	
Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg				
20	25	30		
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala				
35	40	45		

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
 50 55 60
 Leu Ser Cys Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
 65 70 75 80
 Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val
 85 90 95
 Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys
 100 105 110
 Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr
 115 120 125
 Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His
 130 135 140
 Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val
 145 150 155 160
 Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Ile
 165 170 175
 Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr
 180 185 190
 Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn
 195 200 205

Trp

<210> 9

<211> 483

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..480

<220>

<221> mat_peptide

<222> 1..477

<400> 9

atg ccc ggt tgc tct ttc tct atc ttc ctc ttg gcc ctg ctg tcc tgt
 Met Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys
 1 5 10 15

48

ctg acc ata cca gct tcc gct tat gaa gtg cgc aac gtg tcc ggg gtg
 Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val Ser Gly Val
 20 25 30

96

tac cat gtc acg aac gac tgc tcc aac tca agc ata gtg tat gag gca	144
Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala	
35 40 45	
gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc gtt cgg gag	192
Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys Val Arg Glu	
50 55 60	
ggc aac tcc tcc cgt tgc tgg gtg gcg ctc act ccc acg ctc gcg gcc	240
Gly Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr Leu Ala Ala	
65 70 75 80	
agg aac gcc agc gtc ccc aca acg aca ata cga cgc cac gtc gat ttg	288
Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His Val Asp Leu	
85 90 95	
ctc gtt ggg gct gct gct ttc tgt tcc gct atg tac gtg ggg gat ctc	336
Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val Gly Asp Leu	
100 105 110	
tgc gga tct gtt ttc ctt gtt tcc cag ctg ttc acc ttc tca cct cgc	384
Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Phe Ser Pro Arg	
115 120 125	
cgg cat caa aca gta cag gac tgc aac tgc tca atc tat ccc gcc cat	432
Arg His Gln Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His	
130 135 140	
gta tca ggt cac cgc atg gct tgg gat atg atg atg aac tgg tcc taatag	483
Val Ser Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp Ser	
145 150 155	

<210> 10

<211> 159

<212> PRT

<213> Hepatitis C virus

<400> 10

Met Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys	
1 5 10 15	
Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val Ser Gly Val	
20 25 30	
Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala	
35 40 45	
Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys Val Arg Glu	
50 55 60	
Gly Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr Leu Ala Ala	
65 70 75 80	

Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His Val Asp Leu
85 90 95

Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val Gly Asp Leu
100 105 110

Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Phe Ser Pro Arg
115 120 125

Arg His Gln Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His
130 135 140

Val Ser Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp Ser
145 150 155

<210> 11

<211> 480

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..477

<220>

<221> mat_peptide

<222> 1..474

<400> 11

atg tcc ggt tgc tct ttc tct atc ttc ctc ttg gcc ctg ctg tcc tgt	48
Met Ser Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys	
1 5 10 15	

ctg acc ata cca gct tcc gct tat gaa gtg cgc aac gtg tcc ggg gtg	96
Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val Ser Gly Val	
20 25 30	

tac cat gtc acg aac gac tgc tcc aac tca agc ata gtg tat gag gca	144
Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala	
35 40 45	

gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc gtt cgg gag	192
Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys Val Arg Glu	
50 55 60	

ggc aac tcc tcc cgt tgc tgg gtg gcg ctc act ccc acg ctc gcg gcc	240
Gly Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr Leu Ala Ala	
65 70 75 80	

agg aac gcc agc gtc ccc aca acg aca ata cga cgc cac gtc gat ttg	288
Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His Val Asp Leu	
85 90 95	

ctc gtt ggg gct gct gct ttc tgt tcc gct atg tac gtg ggg gat ctc	336
Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val Gly Asp Leu	
100 105 110	

tgc gga tct gtt ttc ctt gtt tcc cag ctg ttc acc ttc tca cct cgc	384
Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Phe Ser Pro Arg	
115 120 125	

cgg cat caa aca gta cag gac tgc aac tgc tca atc tat ccc ggc cat	432
Arg His Gln Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His	
130 135 140	

gta tca ggt cac cgc atg gct tgg gat atg atg atg aac tgg taatag	480
Val Ser Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp	
145 150 155	

<210> 12

<211> 158
 <212> PRT
 <213> Hepatitis C virus

<400> 12

Met Ser Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys
1 5 10 15

Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val Ser Gly Val
20 25 30

Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala
35 40 45

Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys Val Arg Glu
50 55 60

Gly Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr Leu Ala Ala
65 70 75 80

Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His Val Asp Leu
85 90 95

Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val Gly Asp Leu
100 105 110

Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Phe Ser Pro Arg
115 120 125

Arg His Gln Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His
130 135 140

Val Ser Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp
145 150 155

<210> 13

<211> 636
 <212> DNA
 <213> Hepatitis C virus

<220>

<221> CDS
<222> 1..633

<220>
<221> mat_peptide
<222> 1..630

<400> 13

atg ctg ggt aag gcc atc gat acc ctt acg tgc ggc ttc gcc gac ctc	48
Met Leu Gly Lys Ala Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu	
1 5 10 15	
gtg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggc gct gcc agg	96
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg	
20 25 30	
gcc ctg gcg cat ggc gtc cgg gtt ctg gaa gac ggc gtg aac tat gca	144
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala	
35 40 45	
aca ggg aat ttg cct ggt tgc tct ttc tct atc ttc ctc ttg gct tta	192
Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu	
50 55 60	
ctg tcc tgt cta acc att cca gct tcc gct tac gag gtg cgc aac gtg	240
Leu Ser Cys Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val	
65 70 75 80	
tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg	288
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val	
85 90 95	
tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc	336
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	
100 105 110	
gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg	384
Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr	
115 120 125	
ctc gcg gct agg aac gcc agc atc ccc act aca aca ata cga cgc cac	432
Leu Ala Ala Arg Asn Ala Ser Ile Pro Thr Thr Thr Ile Arg Arg His	
130 135 140	
gtc gat ttg ctc gtt ggg gcg gct gct ttc tgt tcc gct atg tac gtg	480
Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val	
145 150 155 160	
ggg gat ctc tgc gga tct gtc ttc ctc gtc tcc cag ctg ttc acc atc	528
Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Ile	
165 170 175	
tcg cct cgc cgg cat gag acg gtg cag gac tgc aat tgc tca atc tat	576
Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr	
180 185 190	
ccc ggc cac ata acg ggt cac cgt atg gct tgg gat atg atg atg aac	624

Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn
 195 200 205

tgg tac taatag
 Trp Tyr
 210

636

<210> 14

<211> 210

<212> PRT

<213> Hepatitis C virus

<400> 14

Met Leu Gly Lys Ala Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
 1 5 10 15

Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
 20 25 30

Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
 35 40 45

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
 50 55 60

Leu Ser Cys Leu Thr Ile Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
 65 70 75 80

Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val
 85 90 95

Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys
 100 105 110

Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr
 115 120 125

Leu Ala Ala Arg Asn Ala Ser Ile Pro Thr Thr Thr Ile Arg Arg His
 130 135 140

Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val
 145 150 155 160

Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu Phe Thr Ile
 165 170 175

Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr
 180 185 190

Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn
 195 200 205

Trp Tyr
 210

<210> 15

<211> 26

<212> DNA

<213> Hepatitis C virus

<400> 15

atgcccggtt gctctttctc tatctt

26

<210> 16

<211> 26

<212> DNA

<213> Hepatitis C virus

<400> 16

atggtgggta aggtcatcga taccct

26

<210> 17

<211> 30

<212> DNA

<213> Hepatitis C virus

<220>

<221> misc_feature

<223>/note="antisense"

<400> 17

ctattaggac cagttcatca tcatatccca

30

<210> 18

<211> 27

<212> DNA

<213> Hepatitis C virus

<400> 18

ctattaccag ttcacatca tatccca

27

<210> 19

<211> 36

<212> DNA

<213> Hepatitis C virus

<400> 19

atacgacgcc acgtcgattc ccagctgttc accatc

36

<210> 20

<211> 36

<212> DNA

<213> Hepatitis C virus

<220>

<221> misc_feature

<223>/note="antisense"

<400> 20

gatggtgaac agctgggaat cgacgtggcg tcgtat

36

<210> 21

<211> 723

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..720

<220>

<221> mat_peptide

<222> 1..717

<400> 21

atg ttg ggt aag gtc atc gat acc ctt aca tgc ggc ttc gcc gac ctc
Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
1 5 10 15

48

gtg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggc gct gcc agg
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
20 25 30

96

gcc ctg gcg cat ggc gtc cgg gtt ctg gag gac ggc gtg aac tat gca
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
35 40 45

144

aca ggg aat ttg ccc ggt tgc tct ttc tct atc ttc ctc ttg gct ttg
Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
50 55 60

192

ctg tcc tgt ctg acc gtt cca gct tcc gct tat gaa gtg cgc aac gtg
Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
65 70 75 80

240

tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val
85 90 95

288

tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc	336
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	
100 105 110	
gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg	384
Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr	
115 120 125	
ctc gca gct agg aac gcc agc gtc ccc acc acg aca ata cga cgc cac	432
Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His	
130 135 140	
gtc gat tcc cag ctg ttc acc atc tcg cct cgc cgg cat gag acg gtg	480
Val Asp Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val	
145 150 155 160	
cag gac tgc aat tgc tca atc tat ccc ggc cac ata acg ggt cac cgt	528
Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg	
165 170 175	
atg gct tgg gat atg atg atg aac tgg tcg cct aca acg gcc ctg gtg	576
Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val	
180 185 190	
gta tcg cag ctg ctc cgg atc cca caa gct gtc gtg gac atg gtg gcg	624
Val Ser Gln Leu Leu Arg Ile Pro Gln Ala Val Val Asp Met Val Ala	
195 200 205	
ggg gcc cat tgg gga gtc ctg gcg ggt ctc gcc tac tat tcc atg gtg	672
Gly Ala His Trp Gly Val Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val	
210 215 220	
ggg aac tgg gct aag gtt ttg att gtg atg cta ctc ttt gct ccc taatag	723
Gly Asn Trp Ala Lys Val Leu Ile Val Met Leu Leu Phe Ala Pro	
225 230 235	

<210> 22

<211> 239

<212> PRT

<213> Hepatitis C virus

<400> 22

Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
1 5 10 15
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
20 25 30
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
35 40 45
Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
50 55 60

Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
 65 70 75 80
 Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val
 85 90 95
 Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys
 100 105 110
 Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr
 115 120 125
 Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His
 130 135 140
 Val Asp Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val
 145 150 155 160
 Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg
 165 170 175
 Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val
 180 185 190
 Val Ser Gln Leu Leu Arg Ile Pro Gln Ala Val Val Asp Met Val Ala
 195 200 205
 Gly Ala His Trp Gly Val Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val
 210 215 220
 Gly Asn Trp Ala Lys Val Leu Ile Val Met Leu Leu Phe Ala Pro
 225 230 235

<210> 23

<211> 561

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..558

<220>

<221> mat_peptide

<222> 1..555

<400> 23

atg ttg ggt aag gtc atc gat acc ctt aca tgc ggc ttc gcc gac ctc	48
Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu	
1 5 10 15	
gtg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggc gct gcc agg	96
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg	
20 25 30	
gcc ctg gcg cat ggc gtc cgg gtt ctg gag gac ggc gtg aac tat gca	144

Ala	Leu	Ala	His	Gly	Val	Arg	Val	Leu	Glu	Asp	Gly	Val	Asn	Tyr	Ala	
		35					40					45				
aca	ggg	aat	ttg	ccc	ggt	tgc	tct	ttc	tct	atc	ttc	ctc	ttg	gct	ttg	192
Thr	Gly	Asn	Leu	Pro	Gly	Cys	Ser	Phe	Ser	Ile	Phe	Leu	Leu	Ala	Leu	
	50					55					60					
ctg	tcc	tgt	ctg	acc	gtt	cca	gct	tcc	gct	tat	gaa	gtg	cgc	aac	gtg	240
Leu	Ser	Cys	Leu	Thr	Val	Pro	Ala	Ser	Ala	Tyr	Glu	Val	Arg	Asn	Val	
	65				70					75					80	
tcc	ggg	atg	tac	cat	gtc	acg	aac	gac	tgc	tcc	aac	tca	agc	att	gtg	288
Ser	Gly	Met	Tyr	His	Val	Thr	Asn	Asp	Cys	Ser	Asn	Ser	Ser	Ile	Val	
				85					90					95		
tat	gag	gca	gcg	gac	atg	atc	atg	cac	acc	ccc	ggg	tgc	gtg	ccc	tgc	336
Tyr	Glu	Ala	Ala	Asp	Met	Ile	Met	His	Thr	Pro	Gly	Cys	Val	Pro	Cys	
			100					105					110			
gtt	cgg	gag	aac	aac	tct	tcc	cgc	tgc	tgg	gta	gcg	ctc	acc	ccc	acg	384
Val	Arg	Glu	Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	Ala	Leu	Thr	Pro	Thr	
		115					120					125				
ctc	gca	gct	agg	aac	gcc	agc	gtc	ccc	acc	acg	aca	ata	cga	cgc	cac	432
Leu	Ala	Ala	Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	Thr	Ile	Arg	Arg	His	
	130					135					140					
gtc	gat	tcc	cag	ctg	ttc	acc	atc	tcg	cct	cgc	cgg	cat	gag	acg	gtg	480
Val	Asp	Ser	Gln	Leu	Phe	Thr	Ile	Ser	Pro	Arg	Arg	His	Glu	Thr	Val	
	145				150					155					160	
cag	gac	tgc	aat	tgc	tca	atc	tat	ccc	ggc	cac	ata	acg	ggt	cac	cgt	528
Gln	Asp	Cys	Asn	Cys	Ser	Ile	Tyr	Pro	Gly	His	Ile	Thr	Gly	His	Arg	
			165						170					175		
atg	gct	tgg	gat	atg	atg	atg	aac	tgg	taatag							561
Met	Ala	Trp	Asp	Met	Met	Met	Asn	Trp								
			180					185								
<210> 24																
<211> 185																
<212> PRT																
<213> Hepatitis C virus																
<400> 24																
Met	Leu	Gly	Lys	Val	Ile	Asp	Thr	Leu	Thr	Cys	Gly	Phe	Ala	Asp	Leu	
	1			5					10					15		
Val	Gly	Tyr	Ile	Pro	Leu	Val	Gly	Ala	Pro	Leu	Gly	Gly	Ala	Ala	Arg	
			20					25					30			
Ala	Leu	Ala	His	Gly	Val	Arg	Val	Leu	Glu	Asp	Gly	Val	Asn	Tyr	Ala	
		35					40					45				
Thr	Gly	Asn	Leu	Pro	Gly	Cys	Ser	Phe	Ser	Ile	Phe	Leu	Leu	Ala	Leu	

50					55					60					
Leu	Ser	Cys	Leu	Thr	Val	Pro	Ala	Ser	Ala	Tyr	Glu	Val	Arg	Asn	Val
65					70					75					80
Ser	Gly	Met	Tyr	His	Val	Thr	Asn	Asp	Cys	Ser	Asn	Ser	Ser	Ile	Val
				85					90					95	
Tyr	Glu	Ala	Ala	Asp	Met	Ile	Met	His	Thr	Pro	Gly	Cys	Val	Pro	Cys
			100					105					110		
Val	Arg	Glu	Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	Ala	Leu	Thr	Pro	Thr
		115					120					125			
Leu	Ala	Ala	Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	Thr	Ile	Arg	Arg	His
	130					135						140			
Val	Asp	Ser	Gln	Leu	Phe	Thr	Ile	Ser	Pro	Arg	Arg	His	Glu	Thr	Val
145						150					155				160
Gln	Asp	Cys	Asn	Cys	Ser	Ile	Tyr	Pro	Gly	His	Ile	Thr	Gly	His	Arg
			165						170					175	
Met	Ala	Trp	Asp	Met	Met	Met	Asn	Trp							
			180					185							

<210> 25

<211> 606

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..603

<220>

<221> mat_peptide

<222> 1..600

<400> 25

atg	ttg	ggt	aag	gtc	atc	gat	acc	ctt	aca	tgc	ggc	ttc	gcc	gac	ctc	48
Met	Leu	Gly	Lys	Val	Ile	Asp	Thr	Leu	Thr	Cys	Gly	Phe	Ala	Asp	Leu	
1				5				10						15		
gtg	ggg	tac	att	ccg	ctc	gtc	ggc	gcc	ccc	cta	ggg	ggc	gct	gcc	agg	96
Val	Gly	Tyr	Ile	Pro	Leu	Val	Gly	Ala	Pro	Leu	Gly	Gly	Ala	Ala	Arg	
			20					25					30			
gcc	ctg	gcg	cat	ggc	gtc	cgg	gtt	ctg	gag	gac	ggc	gtg	aac	tat	gca	144
Ala	Leu	Ala	His	Gly	Val	Arg	Val	Leu	Glu	Asp	Gly	Val	Asn	Tyr	Ala	
		35					40					45				
aca	ggg	aat	ttg	ccc	ggt	tgc	tct	ttc	tct	atc	ttc	ctc	ttg	gct	ttg	192
Thr	Gly	Asn	Leu	Pro	Gly	Cys	Ser	Phe	Ser	Ile	Phe	Leu	Leu	Ala	Leu	
	50					55					60					

ctg tcc tgt ctg acc gtt cca gct tcc gct tat gaa gtg cgc aac gtg	240
Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val	
65 70 75 80	

tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg	288
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val	
85 90 95	

tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc	336
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	
100 105 110	

gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg	384
Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr	
115 120 125	

ctc gca gct agg aac gcc agc gtc ccc acc acg aca ata cga cgc cac	432
Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His	
130 135 140	

gtc gat tcc cag ctg ttc acc atc tcg cct cgc cgg cat gag acg gtg	480
Val Asp Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val	
145 150 155 160	

cag gac tgc aat tgc tca atc tat ccc ggc cac ata acg ggt cac cgt	528
Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg	
165 170 175	

atg gct tgg gat atg atg atg aac tgg tcg cct aca acg gcc ctg gtg	576
Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val	
180 185 190	

gta tcg cag ctg ctc cgg atc ctc taatag	606
Val Ser Gln Leu Leu Arg Ile Leu	
195 200	

<210> 26

<211> 200

<212> PRT

<213> Hepatitis C virus

<400> 26

Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
1 5 10 15

Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
20 25 30

Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
35 40 45

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
50 55 60

Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val

65	70	75	80
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val	85	90	95
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	100	105	110
Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr	115	120	125
Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His	130	135	140
Val Asp Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val	145	150	155
Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg	165	170	175
Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val	180	185	190
Val Ser Gln Leu Leu Arg Ile Leu	195	200	

<210> 27

<211> 636

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..633

<220>

<221> mat_peptide

<222> 1..630

<400> 27

atg ttg ggt aag gtc atc gat acc ctt aca tgc ggc ttc gcc gac ctc	48
Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu	
1 5 10 15	
gtg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggc gct gcc agg	96
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg	
20 25 30	
gcc ctg gcg cat ggc gtc cgg gtt ctg gag gac ggc gtg aac tat gca	144
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala	
35 40 45	
aca ggg aat ttg ccc ggt tgc tct ttc tct atc ttc ctc ttg gct ttg	192
Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu	
50 55 60	

ctg tcc tgt ctg acc gtt cca gct tcc gct tat gaa gtg cgc aac gtg	240
Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val	
65 70 75 80	

tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg	288
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val	
85 90 95	

tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc	336
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	
100 105 110	

gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg	384
Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr	
115 120 125	

ctc gca gct agg aac gcc agc gtc ccc acc acg aca ata cga cgc cac	432
Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His	
130 135 140	

gtc gat tcc cag ctg ttc acc atc tcg cct cgc cgg cat gag acg gtg	480
Val Asp Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val	
145 150 155 160	

cag gac tgc aat tgc tca atc tat ccc ggc cac ata acg ggt cac cgt	528
Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg	
165 170 175	

atg gct tgg gat atg atg atg aac tgg tcg cct aca acg gcc ctg gtg	576
Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val	
180 185 190	

gta tcg cag ctg ctc cgg atc gtg atc gag ggc aga cac cat cac cac	624
Val Ser Gln Leu Leu Arg Ile Val Ile Glu Gly Arg His His His His	
195 200 205	

cat cac taatag	636
His His	
210	
<210> 28	

<211> 210
 <212> PRT
 <213> Hepatitis C virus

<400> 28

Met Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu	
1 5 10 15	
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg	
20 25 30	
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala	
35 40 45	

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
 50 55 60
 Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
 65 70 75 80
 Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val
 85 90 95
 Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys
 100 105 110
 Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu Thr Pro Thr
 115 120 125
 Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr Thr Ile Arg Arg His
 130 135 140
 Val Asp Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val
 145 150 155 160
 Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg
 165 170 175
 Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val
 180 185 190
 Val Ser Gln Leu Leu Arg Ile Val Ile Glu Gly Arg His His His His
 195 200 205
 His His
 210

<210> 29

<211> 630

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..627

<220>

<221> mat_peptide

<222> 1..624

<400> 29

atg ggt aag gtc atc gat acc ctt acg tgc gga ttc gcc gat ctc atg
 Met Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met
 1 5 10 15
 ggg tac atc ccg ctc gtc ggc gct ccc gta gga ggc gtc gca aga gcc
 Gly Tyr Ile Pro Leu Val Gly Ala Pro Val Gly Gly Val Ala Arg Ala
 20 25 30

48

96

ctt gcg cat ggc gtg agg gcc ctt gaa gac ggg ata aat ttc gca aca	144
Leu Ala His Gly Val Arg Ala Leu Glu Asp Gly Ile Asn Phe Ala Thr	
35 40 45	

ggg aat ttg ccc ggt tgc tcc ttt tct att ttc ctt ctc gct ctg ttc	192
Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Phe	
50 55 60	

tct tgc tta att cat cca gca gct agt cta gag tgg cgg aat acg tct	240
Ser Cys Leu Ile His Pro Ala Ala Ser Leu Glu Trp Arg Asn Thr Ser	
65 70 75 80	

ggc ctc tat gtc ctt acc aac gac tgt tcc aat agc agt att gtg tac	288
Gly Leu Tyr Val Leu Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr	
85 90 95	

gag gcc gat gac gtt att ctg cac aca ccc ggc tgc ata cct tgt gtc	336
Glu Ala Asp Asp Val Ile Leu His Thr Pro Gly Cys Ile Pro Cys Val	
100 105 110	

cag gac ggc aat aca tcc acg tgc tgg acc cca gtg aca cct aca gtg	384
Gln Asp Gly Asn Thr Ser Thr Cys Trp Thr Pro Val Thr Pro Thr Val	
115 120 125	

gca gtc aag tac gtc gga gca acc acc gct tcg ata cgc agt cat gtg	432
Ala Val Lys Tyr Val Gly Ala Thr Thr Ala Ser Ile Arg Ser His Val	
130 135 140	

gac cta tta gtg ggc gcg gcc acg atg tgc tct gcg ctc tac gtg ggt	480
Asp Leu Leu Val Gly Ala Ala Thr Met Cys Ser Ala Leu Tyr Val Gly	
145 150 155 160	

gac atg tgt ggg gct gtc ttc ctc gtg gga caa gcc ttc acg ttc aga	528
Asp Met Cys Gly Ala Val Phe Leu Val Gly Gln Ala Phe Thr Phe Arg	
165 170 175	

cct cgt cgc cat caa acg gtc cag acc tgt aac tgc tcg ctg tac cca	576
Pro Arg Arg His Gln Thr Val Gln Thr Cys Asn Cys Ser Leu Tyr Pro	
180 185 190	

ggc cat ctt tca gga cat cga atg gct tgg gat atg atg atg aac tgg	624
Gly His Leu Ser Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp	
195 200 205	

taatag	630
--------	-----

<210> 30

<211> 208

<212> PRT

<213> Hepatitis C virus

<400> 30

Met Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met
1 5 10 15

Gly Tyr Ile Pro Leu Val Gly Ala Pro Val Gly Gly Val Ala Arg Ala
 20 25 30
 Leu Ala His Gly Val Arg Ala Leu Glu Asp Gly Ile Asn Phe Ala Thr
 35 40 45
 Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Phe
 50 55 60
 Ser Cys Leu Ile His Pro Ala Ala Ser Leu Glu Trp Arg Asn Thr Ser
 65 70 75 80
 Gly Leu Tyr Val Leu Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr
 85 90 95
 Glu Ala Asp Asp Val Ile Leu His Thr Pro Gly Cys Ile Pro Cys Val
 100 105 110
 Gln Asp Gly Asn Thr Ser Thr Cys Trp Thr Pro Val Thr Pro Thr Val
 115 120 125
 Ala Val Lys Tyr Val Gly Ala Thr Thr Ala Ser Ile Arg Ser His Val
 130 135 140
 Asp Leu Leu Val Gly Ala Ala Thr Met Cys Ser Ala Leu Tyr Val Gly
 145 150 155 160
 Asp Met Cys Gly Ala Val Phe Leu Val Gly Gln Ala Phe Thr Phe Arg
 165 170 175
 Pro Arg Arg His Gln Thr Val Gln Thr Cys Asn Cys Ser Leu Tyr Pro
 180 185 190
 Gly His Leu Ser Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp
 195 200 205

<210> 31

<211> 630

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..627

<220>

<221> mat_peptide

<222> 1..624

<400> 31

atg ggt aag gtc atc gat acc cta acg tgc gga ttc gcc gat ctc atg
 Met Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met
 1 5 10 15

48

ggg tat atc ccg ctc gta ggc ggc ccc att ggg ggc gtc gca agg gct

96

Gly Tyr Ile Pro Leu Val Gly Gly Pro Ile Gly Gly Val Ala Arg Ala	
20 25 30	
ctc gca cac ggt gtg agg gtc ctt gag gac ggg gta aac tat gca aca	144
Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala Thr	
35 40 45	
ggg aat tta ccc ggt tgc tct ttc tct atc ttt att ctt gct ctt ctc	192
Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Ile Leu Ala Leu Leu	
50 55 60	
tcg tgt ctg acc gtt ccg gcc tct gca gtt ccc tac cga aat gcc tct	240
Ser Cys Leu Thr Val Pro Ala Ser Ala Val Pro Tyr Arg Asn Ala Ser	
65 70 75 80	
ggg att tat cat gtt acc aat gat tgc cca aac tct tcc ata gtc tat	288
Gly Ile Tyr His Val Thr Asn Asp Cys Pro Asn Ser Ser Ile Val Tyr	
85 90 95	
gag gca gat aac ctg atc cta cac gca cct ggt tgc gtg cct tgt gtc	336
Glu Ala Asp Asn Leu Ile Leu His Ala Pro Gly Cys Val Pro Cys Val	
100 105 110	
atg aca ggt aat gtg agt aga tgc tgg gtc caa att acc cct aca ctg	384
Met Thr Gly Asn Val Ser Arg Cys Trp Val Gln Ile Thr Pro Thr Leu	
115 120 125	
tca gcc ccg agc ctc gga gca gtc acg gct cct ctt cgg aga gcc gtt	432
Ser Ala Pro Ser Leu Gly Ala Val Thr Ala Pro Leu Arg Arg Ala Val	
130 135 140	
gac tac cta gcg gga ggg gct gcc ctc tgc tcc gcg tta tac gta gga	480
Asp Tyr Leu Ala Gly Gly Ala Ala Leu Cys Ser Ala Leu Tyr Val Gly	
145 150 155 160	
gac gcg tgt ggg gca cta ttc ttg gta ggc caa atg ttc acc tat agg	528
Asp Ala Cys Gly Ala Leu Phe Leu Val Gly Gln Met Phe Thr Tyr Arg	
165 170 175	
cct cgc cag cac gct acg gtg cag aac tgc aac tgt tcc att tac agt	576
Pro Arg Gln His Ala Thr Val Gln Asn Cys Asn Cys Ser Ile Tyr Ser	
180 185 190	
ggc cat gtt acc ggc cac cgg atg gca tgg gat atg atg atg aac tgg	624
Gly His Val Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp	
195 200 205	
taatag	630

<210> 32

<211> 208

<212> PRT

<213> Hepatitis C virus

<400> 32

Met Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met
 1 5 10 15
 Gly Tyr Ile Pro Leu Val Gly Gly Pro Ile Gly Gly Val Ala Arg Ala
 20 25 30
 Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala Thr
 35 40 45
 Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Ile Leu Ala Leu Leu
 50 55 60
 Ser Cys Leu Thr Val Pro Ala Ser Ala Val Pro Tyr Arg Asn Ala Ser
 65 70 75 80
 Gly Ile Tyr His Val Thr Asn Asp Cys Pro Asn Ser Ser Ile Val Tyr
 85 90 95
 Glu Ala Asp Asn Leu Ile Leu His Ala Pro Gly Cys Val Pro Cys Val
 100 105 110
 Met Thr Gly Asn Val Ser Arg Cys Trp Val Gln Ile Thr Pro Thr Leu
 115 120 125
 Ser Ala Pro Ser Leu Gly Ala Val Thr Ala Pro Leu Arg Arg Ala Val
 130 135 140
 Asp Tyr Leu Ala Gly Gly Ala Ala Leu Cys Ser Ala Leu Tyr Val Gly
 145 150 155 160
 Asp Ala Cys Gly Ala Leu Phe Leu Val Gly Gln Met Phe Thr Tyr Arg
 165 170 175
 Pro Arg Gln His Ala Thr Val Gln Asn Cys Asn Cys Ser Ile Tyr Ser
 180 185 190
 Gly His Val Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp
 195 200 205

<210> 33

<211> 23

<212> DNA

<213> Hepatitis C virus

<400> 33

tgggatatga tgatgaactg gtc

23

<210> 34

<211> 30

<212> DNA

<213> Hepatitis C virus

<400> 34

ctattatggg ggtaagccac agagcaggag

30

<210> 35

<211> 1476

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..1473

<220>

<221> mat_peptide

<222> 1..1470

<400> 35

tgg	gat	atg	atg	atg	aac	tgg	tcg	cct	aca	acg	gcc	ctg	gtg	gta	tcg	48
Trp	Asp	Met	Met	Met	Asn	Trp	Ser	Pro	Thr	Thr	Ala	Leu	Val	Val	Ser	
1				5				10					15			

cag	ctg	ctc	cgg	atc	cca	caa	gct	gtc	gtg	gac	atg	gtg	gcg	ggg	gcc	96
Gln	Leu	Leu	Arg	Ile	Pro	Gln	Ala	Val	Val	Asp	Met	Val	Ala	Gly	Ala	
		20					25					30				

cat	tgg	gga	gtc	ctg	gcg	ggc	ctc	gcc	tac	tat	tcc	atg	gtg	ggg	aac	144
His	Trp	Gly	Val	Leu	Ala	Gly	Leu	Ala	Tyr	Tyr	Ser	Met	Val	Gly	Asn	
		35				40					45					

tgg	gct	aag	gtt	ttg	gtt	gtg	atg	cta	ctc	ttt	gcc	ggc	gtc	gac	ggg	192
Trp	Ala	Lys	Val	Leu	Val	Val	Met	Leu	Leu	Phe	Ala	Gly	Val	Asp	Gly	
	50					55				60						

cat	acc	cgc	gtg	tca	gga	ggg	gca	gca	gcc	tcc	gat	acc	agg	ggc	ctt	240
His	Thr	Arg	Val	Ser	Gly	Gly	Ala	Ala	Ala	Ser	Asp	Thr	Arg	Gly	Leu	
	65				70				75						80	

gtg	tcc	ctc	ttt	agc	ccc	ggg	tcg	gct	cag	aaa	atc	cag	ctc	gta	aac	288
Val	Ser	Leu	Phe	Ser	Pro	Gly	Ser	Ala	Gln	Lys	Ile	Gln	Leu	Val	Asn	
				85				90						95		

acc	aac	ggc	agt	tgg	cac	atc	aac	agg	act	gcc	ctg	aac	tgc	aac	gac	336
Thr	Asn	Gly	Ser	Trp	His	Ile	Asn	Arg	Thr	Ala	Leu	Asn	Cys	Asn	Asp	
			100					105					110			

tcc	ctc	caa	aca	ggg	ttc	ttt	gcc	gca	cta	ttc	tac	aaa	cac	aaa	ttc	384
Ser	Leu	Gln	Thr	Gly	Phe	Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe	
		115					120					125				

aac	tcg	tct	gga	tgc	cca	gag	cgc	ttg	gcc	agc	tgt	cgc	tcc	atc	gac	432
Asn	Ser	Ser	Gly	Cys	Pro	Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp	
	130					135				140						

aag	ttc	gct	cag	ggg	tgg	ggt	ccc	ctc	act	tac	act	gag	cct	aac	agc	480
Lys	Phe	Ala	Gln	Gly	Trp	Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser	

145	150	155	160	
tcg gac cag agg ccc tac tgc tgg cac tac gcg cct cga ccg tgt ggt				528
Ser Asp Gln Arg Pro Tyr Cys Trp His Tyr Ala Pro Arg Pro Cys Gly	165	170	175	
att gta ccc gcg tct cag gtg tgc ggt cca gtg tat tgc ttc acc ccg				576
Ile Val Pro Ala Ser Gln Val Cys Gly Pro Val Tyr Cys Phe Thr Pro	180	185	190	
agc cct gtt gtg gtg ggg acg acc gat cgg ttt ggt gtc ccc acg tat				624
Ser Pro Val Val Val Gly Thr Thr Asp Arg Phe Gly Val Pro Thr Tyr	195	200	205	
aac tgg ggg gcg aac gac tcg gat gtg ctg att ctc aac aac acg cgg				672
Asn Trp Gly Ala Asn Asp Ser Asp Val Leu Ile Leu Asn Asn Thr Arg	210	215	220	
ccg ccg cga ggc aac tgg ttc ggc tgt aca tgg atg aat ggc act ggg				720
Pro Pro Arg Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Gly Thr Gly	225	230	235	240
ttc acc aag acg tgt ggg ggc ccc ccg tgc aac atc ggg ggg gcc ggc				768
Phe Thr Lys Thr Cys Gly Gly Pro Pro Cys Asn Ile Gly Gly Ala Gly	245	250	255	
aac aac acc ttg acc tgc ccc act gac tgt ttt cgg aag cac ccc gag				816
Asn Asn Thr Leu Thr Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu	260	265	270	
gcc acc tac gcc aga tgc ggt tct ggg ccc tgg ctg aca cct agg tgt				864
Ala Thr Tyr Ala Arg Cys Gly Ser Gly Pro Trp Leu Thr Pro Arg Cys	275	280	285	
atg gtt cat tac cca tat agg ctc tgg cac tac ccc tgc act gtc aac				912
Met Val His Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Val Asn	290	295	300	
ttc acc atc ttc aag gtt agg atg tac gtg ggg ggc gtg gag cac agg				960
Phe Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg	305	310	315	320
ttc gaa gcc gca tgc aat tgg act cga gga gag cgt tgt gac ttg gag				1008
Phe Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu	325	330	335	
gac agg gat aga tca gag ctt agc ccg ctg ctg ctg tct aca aca gag				1056
Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Glu	340	345	350	
tgg cag ata ctg ccc tgt tcc ttc acc acc ctg ccg gcc cta tcc acc				1104
Trp Gln Ile Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr	355	360	365	
ggc ctg atc cac ctc cat cag aac atc gtg gac gtg caa tac ctg tac				1152
Gly Leu Ile His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr	370	375	380	

ggt gta ggg tcg gcg gtt gtc tcc ctt gtc atc aaa tgg gag tat gtc	1200
Gly Val Gly Ser Ala Val Val Ser Leu Val Ile Lys Trp Glu Tyr Val	
385 390 395 400	

ctg ttg ctc ttc ctt ctc ctg gca gac gcg cgc atc tgc gcc tgc tta	1248
Leu Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg Ile Cys Ala Cys Leu	
405 410 415	

tgg atg atg ctg ctg ata gct caa gct gag gcc gcc tta gag aac ctg	1296
Trp Met Met Leu Leu Ile Ala Gln Ala Glu Ala Ala Leu Glu Asn Leu	
420 425 430	

gtg gtc ctc aat gcg gcg gcc gtg gcc ggg gcg cat ggc act ctt tcc	1344
Val Val Leu Asn Ala Ala Ala Val Ala Gly Ala His Gly Thr Leu Ser	
435 440 445	

ttc ctt gtg ttc ttc tgt gct gcc tgg tac atc aag ggc agg ctg gtc	1392
Phe Leu Val Phe Phe Cys Ala Ala Trp Tyr Ile Lys Gly Arg Leu Val	
450 455 460	

cct ggt gcg gca tac gcc ttc tat ggc gtg tgg ccg ctg ctc ctg ctt	1440
Pro Gly Ala Ala Tyr Ala Phe Tyr Gly Val Trp Pro Leu Leu Leu Leu	
465 470 475 480	

ctg ctg gcc tta cca cca cga gct tat gcc tagtaa	1476
Leu Leu Ala Leu Pro Pro Arg Ala Tyr Ala	
485 490	

<210> 36

<211> 490

<212> PRT

<213> Hepatitis C virus

<400> 36

Trp Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val Val Ser
1 5 10 15

Gln Leu Leu Arg Ile Pro Gln Ala Val Val Asp Met Val Ala Gly Ala
20 25 30

His Trp Gly Val Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn
35 40 45

Trp Ala Lys Val Leu Val Val Met Leu Leu Phe Ala Gly Val Asp Gly
50 55 60

His Thr Arg Val Ser Gly Gly Ala Ala Ala Ser Asp Thr Arg Gly Leu
65 70 75 80

Val Ser Leu Phe Ser Pro Gly Ser Ala Gln Lys Ile Gln Leu Val Asn
85 90 95

Thr Asn Gly Ser Trp His Ile Asn Arg Thr Ala Leu Asn Cys Asn Asp
100 105 110

Ser	Leu	Gln	Thr	Gly	Phe	Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe
	115						120					125			
Asn	Ser	Ser	Gly	Cys	Pro	Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp
	130					135					140				
Lys	Phe	Ala	Gln	Gly	Trp	Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser
145					150					155					160
Ser	Asp	Gln	Arg	Pro	Tyr	Cys	Trp	His	Tyr	Ala	Pro	Arg	Pro	Cys	Gly
				165					170					175	
Ile	Val	Pro	Ala	Ser	Gln	Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro
			180					185						190	
Ser	Pro	Val	Val	Val	Gly	Thr	Thr	Asp	Arg	Phe	Gly	Val	Pro	Thr	Tyr
		195					200					205			
Asn	Trp	Gly	Ala	Asn	Asp	Ser	Asp	Val	Leu	Ile	Leu	Asn	Asn	Thr	Arg
	210					215					220				
Pro	Pro	Arg	Gly	Asn	Trp	Phe	Gly	Cys	Thr	Trp	Met	Asn	Gly	Thr	Gly
225					230					235					240
Phe	Thr	Lys	Thr	Cys	Gly	Gly	Pro	Pro	Cys	Asn	Ile	Gly	Gly	Ala	Gly
				245					250					255	
Asn	Asn	Thr	Leu	Thr	Cys	Pro	Thr	Asp	Cys	Phe	Arg	Lys	His	Pro	Glu
			260					265					270		
Ala	Thr	Tyr	Ala	Arg	Cys	Gly	Ser	Gly	Pro	Trp	Leu	Thr	Pro	Arg	Cys
		275					280					285			
Met	Val	His	Tyr	Pro	Tyr	Arg	Leu	Trp	His	Tyr	Pro	Cys	Thr	Val	Asn
	290					295					300				
Phe	Thr	Ile	Phe	Lys	Val	Arg	Met	Tyr	Val	Gly	Gly	Val	Glu	His	Arg
305					310					315					320
Phe	Glu	Ala	Ala	Cys	Asn	Trp	Thr	Arg	Gly	Glu	Arg	Cys	Asp	Leu	Glu
				325					330					335	
Asp	Arg	Asp	Arg	Ser	Glu	Leu	Ser	Pro	Leu	Leu	Leu	Ser	Thr	Thr	Glu
			340					345					350		
Trp	Gln	Ile	Leu	Pro	Cys	Ser	Phe	Thr	Thr	Leu	Pro	Ala	Leu	Ser	Thr
		355					360					365			
Gly	Leu	Ile	His	Leu	His	Gln	Asn	Ile	Val	Asp	Val	Gln	Tyr	Leu	Tyr
	370					375					380				
Gly	Val	Gly	Ser	Ala	Val	Val	Ser	Leu	Val	Ile	Lys	Trp	Glu	Tyr	Val
385					390					395					400
Leu	Leu	Leu	Phe	Leu	Leu	Leu	Ala	Asp	Ala	Arg	Ile	Cys	Ala	Cys	Leu
				405				410						415	

Trp Met Met Leu Leu Ile Ala Gln Ala Glu Ala Ala Leu Glu Asn Leu
 420 425 430
 Val Val Leu Asn Ala Ala Ala Val Ala Gly Ala His Gly Thr Leu Ser
 435 440 445
 Phe Leu Val Phe Phe Cys Ala Ala Trp Tyr Ile Lys Gly Arg Leu Val
 450 455 460
 Pro Gly Ala Ala Tyr Ala Phe Tyr Gly Val Trp Pro Leu Leu Leu Leu
 465 470 475 480
 Leu Leu Ala Leu Pro Pro Arg Ala Tyr Ala
 485 490

<210> 37

<211> 1021

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 2..1018

<220>

<221> mat_peptide

<222> 2..1015

<400> 37

g atc cca caa gct gtc gtg gac atg gtg gcg ggg gcc cat tgg gga	46
Ile Pro Gln Ala Val Val Asp Met Val Ala Gly Ala His Trp Gly	
1 5 10 15	
gtc ctg gcg ggc ctc gcc tac tat tcc atg gtg ggg aac tgg gct aag	94
Val Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn Trp Ala Lys	
20 25 30	
gtt ttg gtt gtg atg cta ctc ttt gcc ggc gtc gac ggg cat acc cgc	142
Val Leu Val Val Met Leu Leu Phe Ala Gly Val Asp Gly His Thr Arg	
35 40 45	
gtg tca gga ggg gca gca gcc tcc gat acc agg ggc ctt gtg tcc ctc	190
Val Ser Gly Gly Ala Ala Ala Ser Asp Thr Arg Gly Leu Val Ser Leu	
50 55 60	
ttt agc ccc ggg tcg gct cag aaa atc cag ctc gta aac acc aac ggc	238
Phe Ser Pro Gly Ser Ala Gln Lys Ile Gln Leu Val Asn Thr Asn Gly	
65 70 75	
agt tgg cac atc aac agg act gcc ctg aac tgc aac gac tcc ctc caa	286
Ser Trp His Ile Asn Arg Thr Ala Leu Asn Cys Asn Asp Ser Leu Gln	
80 85 90 95	
aca ggg ttc ttt gcc gca cta ttc tac aaa cac aaa ttc aac tcg tct	334

Thr Gly Phe Phe Ala Ala Leu Phe Tyr Lys His Lys Phe Asn Ser Ser	
100 105 110	
gga tgc cca gag cgc ttg gcc agc tgt cgc tcc atc gac aag ttc gct	382
Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Ser Ile Asp Lys Phe Ala	
115 120 125	
cag ggg tgg ggt ccc ctc act tac act gag cct aac agc tcg gac cag	430
Gln Gly Trp Gly Pro Leu Thr Tyr Thr Glu Pro Asn Ser Ser Asp Gln	
130 135 140	
agg ccc tac tgc tgg cac tac gcg cct cga ccg tgt ggt att gta ccc	478
Arg Pro Tyr Cys Trp His Tyr Ala Pro Arg Pro Cys Gly Ile Val Pro	
145 150 155	
gcg tct cag gtg tgc ggt cca gtg tat tgc ttc acc ccg agc cct gtt	526
Ala Ser Gln Val Cys Gly Pro Val Tyr Cys Phe Thr Pro Ser Pro Val	
160 165 170 175	
gtg gtg ggg acg acc gat cgg ttt ggt gtc ccc acg tat aac tgg ggg	574
Val Val Gly Thr Thr Asp Arg Phe Gly Val Pro Thr Tyr Asn Trp Gly	
180 185 190	
gcg aac gac tcg gat gtg ctg att ctc aac aac acg cgg ccg ccg cga	622
Ala Asn Asp Ser Asp Val Leu Ile Leu Asn Asn Thr Arg Pro Pro Arg	
195 200 205	
ggc aac tgg ttc ggc tgt aca tgg atg aat ggc act ggg ttc acc aag	670
Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Gly Thr Gly Phe Thr Lys	
210 215 220	
acg tgt ggg ggc ccc ccg tgc aac atc ggg ggg gcc ggc aac aac acc	718
Thr Cys Gly Gly Pro Pro Cys Asn Ile Gly Gly Ala Gly Asn Asn Thr	
225 230 235	
ttg acc tgc ccc act gac tgt ttt cgg aag cac ccc gag gcc acc tac	766
Leu Thr Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr	
240 245 250 255	
gcc aga tgc ggt tct ggg ccc tgg ctg aca cct agg tgt atg gtt cat	814
Ala Arg Cys Gly Ser Gly Pro Trp Leu Thr Pro Arg Cys Met Val His	
260 265 270	
tac cca tat agg ctc tgg cac tac ccc tgc act gtc aac ttc acc atc	862
Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Val Asn Phe Thr Ile	
275 280 285	
ttc aag gtt agg atg tac gtg ggg ggc gtg gag cac agg ttc gaa gcc	910
Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Phe Glu Ala	
290 295 300	
gca tgc aat tgg act cga gga gag cgt tgt gac ttg gag gac agg gat	958
Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp	
305 310 315	
aga tca gag ctt agc ccg ctg ctg ctg tct aca aca gag tgg cag agt	1006
Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Glu Trp Gln Ser	
320 325 330 335	

ggc aga gct taatta
Gly Arg Ala

1021

<210> 38

<211> 338

<212> PRT

<213> Hepatitis C virus

<400> 38

Ile	Pro	Gln	Ala	Val	Val	Asp	Met	Val	Ala	Gly	Ala	His	Trp	Gly	Val	
1				5					10					15		
Leu	Ala	Gly	Leu	Ala	Tyr	Tyr	Ser	Met	Val	Gly	Asn	Trp	Ala	Lys	Val	
			20					25					30			
Leu	Val	Val	Met	Leu	Leu	Phe	Ala	Gly	Val	Asp	Gly	His	Thr	Arg	Val	
			35				40					45				
Ser	Gly	Gly	Ala	Ala	Ala	Ser	Asp	Thr	Arg	Gly	Leu	Val	Ser	Leu	Phe	
	50					55					60					
Ser	Pro	Gly	Ser	Ala	Gln	Lys	Ile	Gln	Leu	Val	Asn	Thr	Asn	Gly	Ser	
65					70					75					80	
Trp	His	Ile	Asn	Arg	Thr	Ala	Leu	Asn	Cys	Asn	Asp	Ser	Leu	Gln	Thr	
				85					90					95		
Gly	Phe	Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe	Asn	Ser	Ser	Gly	
			100					105					110			
Cys	Pro	Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp	Lys	Phe	Ala	Gln	
		115					120					125				
Gly	Trp	Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser	Ser	Asp	Gln	Arg	
	130					135					140					
Pro	Tyr	Cys	Trp	His	Tyr	Ala	Pro	Arg	Pro	Cys	Gly	Ile	Val	Pro	Ala	
145					150					155					160	
Ser	Gln	Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro	Ser	Pro	Val	Val	
				165					170					175		
Val	Gly	Thr	Thr	Asp	Arg	Phe	Gly	Val	Pro	Thr	Tyr	Asn	Trp	Gly	Ala	
			180					185					190			
Asn	Asp	Ser	Asp	Val	Leu	Ile	Leu	Asn	Asn	Thr	Arg	Pro	Pro	Arg	Gly	
		195					200					205				
Asn	Trp	Phe	Gly	Cys	Thr	Trp	Met	Asn	Gly	Thr	Gly	Phe	Thr	Lys	Thr	
	210					215					220					
Cys	Gly	Gly	Pro	Pro	Cys	Asn	Ile	Gly	Gly	Ala	Gly	Asn	Asn	Thr	Leu	
225					230					235					240	

Thr Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr Ala
 245 250 255
 Arg Cys Gly Ser Gly Pro Trp Leu Thr Pro Arg Cys Met Val His Tyr
 260 265 270
 Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Val Asn Phe Thr Ile Phe
 275 280 285
 Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Phe Glu Ala Ala
 290 295 300
 Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp Arg
 305 310 315 320
 Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Glu Trp Gln Ser Gly
 325 330 335
 Arg Ala

<210> 39

<211> 1034

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 2..1032

<220>

<221> mat_peptide

<222> 2..1029

<400> 39

g atc cca caa gct gtc gtg gac atg gtg gcg ggg gcc cat tgg gga	46
Ile Pro Gln Ala Val Val Asp Met Val Ala Gly Ala His Trp Gly	
1 5 10 15	
gtc ctg gcg ggc ctc gcc tac tat tcc atg gtg ggg aac tgg gct aag	94
Val Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn Trp Ala Lys	
20 25 30	
gtt ttg gtt gtg atg cta ctc ttt gcc ggc gtc gac ggg cat acc cgc	142
Val Leu Val Val Met Leu Leu Phe Ala Gly Val Asp Gly His Thr Arg	
35 40 45	
gtg tca gga ggg gca gca gcc tcc gat acc agg ggc ctt gtg tcc ctc	190
Val Ser Gly Gly Ala Ala Ala Ser Asp Thr Arg Gly Leu Val Ser Leu	
50 55 60	
ttt agc ccc ggg tcg gct cag aaa atc cag ctc gta aac acc aac ggc	238
Phe Ser Pro Gly Ser Ala Gln Lys Ile Gln Leu Val Asn Thr Asn Gly	

65	70	75	
agt tgg cac atc aac agg act gcc ctg aac tgc aac gac tcc ctc caa			286
Ser Trp His Ile Asn Arg Thr Ala Leu Asn Cys Asn Asp Ser Leu Gln			
80	85	90	95
aca ggg ttc ttt gcc gca cta ttc tac aaa cac aaa ttc aac tcg tct			334
Thr Gly Phe Phe Ala Ala Leu Phe Tyr Lys His Lys Phe Asn Ser Ser			
	100	105	110
gga tgc cca gag cgc ttg gcc agc tgt cgc tcc atc gac aag ttc gct			382
Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Ser Ile Asp Lys Phe Ala			
	115	120	125
cag ggg tgg ggt ccc ctc act tac act gag cct aac agc tcg gac cag			430
Gln Gly Trp Gly Pro Leu Thr Tyr Thr Glu Pro Asn Ser Ser Asp Gln			
	130	135	140
agg ccc tac tgc tgg cac tac gcg cct cga ccg tgt ggt att gta ccc			478
Arg Pro Tyr Cys Trp His Tyr Ala Pro Arg Pro Cys Gly Ile Val Pro			
	145	150	155
gcg tct cag gtg tgc ggt cca gtg tat tgc ttc acc ccg agc cct gtt			526
Ala Ser Gln Val Cys Gly Pro Val Tyr Cys Phe Thr Pro Ser Pro Val			
160	165	170	175
gtg gtg ggg acg acc gat cgg ttt ggt gtc ccc acg tat aac tgg ggg			574
Val Val Gly Thr Thr Asp Arg Phe Gly Val Pro Thr Tyr Asn Trp Gly			
	180	185	190
gcg aac gac tcg gat gtg ctg att ctc aac aac acg cgg ccg ccg cga			622
Ala Asn Asp Ser Asp Val Leu Ile Leu Asn Asn Thr Arg Pro Pro Arg			
	195	200	205
ggc aac tgg ttc ggc tgt aca tgg atg aat ggc act ggg ttc acc aag			670
Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Gly Thr Gly Phe Thr Lys			
	210	215	220
acg tgt ggg ggc ccc ccg tgc aac atc ggg ggg gcc ggc aac aac acc			718
Thr Cys Gly Gly Pro Pro Cys Asn Ile Gly Gly Ala Gly Asn Asn Thr			
	225	230	235
ttg acc tgc ccc act gac tgt ttt cgg aag cac ccc gag gcc acc tac			766
Leu Thr Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr			
240	245	250	255
gcc aga tgc ggt tct ggg ccc tgg ctg aca cct agg tgt atg gtt cat			814
Ala Arg Cys Gly Ser Gly Pro Trp Leu Thr Pro Arg Cys Met Val His			
	260	265	270
tac cca tat agg ctc tgg cac tac ccc tgc act gtc aac ttc acc atc			862
Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Val Asn Phe Thr Ile			
	275	280	285
ttc aag gtt agg atg tac gtg ggg ggc gtg gag cac agg ttc gaa gcc			910
Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Phe Glu Ala			
	290	295	300

gca tgc aat tgg act cga gga gag cgt tgt gac ttg gag gac agg gat 958
 Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp
 305 310 315

aga tca gag ctt agc ccg ctg ctg ctg tct aca aca ggt gat cga ggg 1006
 Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gly Asp Arg Gly
 320 325 330 335

cag aca cca tca cca cca tca cta at ag 1034
 Gln Thr Pro Ser Pro Pro Ser Leu
 340

<210> 40

<211> 343

<212> PRT

<213> Hepatitis C virus

<400> 40

Ile Pro Gln Ala Val Val Asp Met Val Ala Gly Ala His Trp Gly Val
 1 5 10 15

Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn Trp Ala Lys Val
 20 25 30

Leu Val Val Met Leu Leu Phe Ala Gly Val Asp Gly His Thr Arg Val
 35 40 45

Ser Gly Gly Ala Ala Ala Ser Asp Thr Arg Gly Leu Val Ser Leu Phe
 50 55 60

Ser Pro Gly Ser Ala Gln Lys Ile Gln Leu Val Asn Thr Asn Gly Ser
 65 70 75 80

Trp His Ile Asn Arg Thr Ala Leu Asn Cys Asn Asp Ser Leu Gln Thr
 85 90 95

Gly Phe Phe Ala Ala Leu Phe Tyr Lys His Lys Phe Asn Ser Ser Gly
 100 105 110

Cys Pro Glu Arg Leu Ala Ser Cys Arg Ser Ile Asp Lys Phe Ala Gln
 115 120 125

Gly Trp Gly Pro Leu Thr Tyr Thr Glu Pro Asn Ser Ser Asp Gln Arg
 130 135 140

Pro Tyr Cys Trp His Tyr Ala Pro Arg Pro Cys Gly Ile Val Pro Ala
 145 150 155 160

Ser Gln Val Cys Gly Pro Val Tyr Cys Phe Thr Pro Ser Pro Val Val
 165 170 175

Val Gly Thr Thr Asp Arg Phe Gly Val Pro Thr Tyr Asn Trp Gly Ala
 180 185 190

Asn Asp Ser Asp Val Leu Ile Leu Asn Asn Thr Arg Pro Pro Arg Gly
 195 200 205

Asn Trp Phe Gly Cys Thr Trp Met Asn Gly Thr Gly Phe Thr Lys Thr
 210 215 220
 Cys Gly Gly Pro Pro Cys Asn Ile Gly Gly Ala Gly Asn Asn Thr Leu
 225 230 235 240
 Thr Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr Ala
 245 250 255
 Arg Cys Gly Ser Gly Pro Trp Leu Thr Pro Arg Cys Met Val His Tyr
 260 265 270
 Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Val Asn Phe Thr Ile Phe
 275 280 285
 Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Phe Glu Ala Ala
 290 295 300
 Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp Arg
 305 310 315 320
 Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gly Asp Arg Gly Gln
 325 330 335
 Thr Pro Ser Pro Pro Ser Leu
 340

<210> 41

<211> 945

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..942

<220>

<221> mat_peptide

<222> 1..939

<400> 41

atg gtg ggg aac tgg gct aag gtt ttg gtt gtg atg cta ctc ttt gcc	48
Met Val Gly Asn Trp Ala Lys Val Leu Val Val Met Leu Leu Phe Ala	
1 5 10 15	
ggc gtc gac ggg cat acc cgc gtg tca gga ggg gca gca gcc tcc gat	96
Gly Val Asp Gly His Thr Arg Val Ser Gly Gly Ala Ala Ala Ser Asp	
20 25 30	
acc agg ggc ctt gtg tcc ctc ttt agc ccc ggg tcg gct cag aaa atc	144
Thr Arg Gly Leu Val Ser Leu Phe Ser Pro Gly Ser Ala Gln Lys Ile	
35 40 45	
cag ctc gta aac acc aac ggc agt tgg cac atc aac agg act gcc ctg	192
Gln Leu Val Asn Thr Asn Gly Ser Trp His Ile Asn Arg Thr Ala Leu	

50	55	60	
aac tgc aac gac tcc ctc caa aca ggg ttc ttt gcc gca cta ttc tac			240
Asn Cys Asn Asp Ser Leu Gln Thr Gly Phe Phe Ala Ala Leu Phe Tyr			
65	70	75	80
aaa cac aaa ttc aac tcg tct gga tgc cca gag cgc ttg gcc agc tgt			288
Lys His Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys			
	85	90	95
cgc tcc atc gac aag ttc gct cag ggg tgg ggt ccc ctc act tac act			336
Arg Ser Ile Asp Lys Phe Ala Gln Gly Trp Gly Pro Leu Thr Tyr Thr			
	100	105	110
gag cct aac agc tcg gac cag agg ccc tac tgc tgg cac tac gcg cct			384
Glu Pro Asn Ser Ser Asp Gln Arg Pro Tyr Cys Trp His Tyr Ala Pro			
	115	120	125
cga ccg tgt ggt att gta ccc gcg tct cag gtg tgc ggt cca gtg tat			432
Arg Pro Cys Gly Ile Val Pro Ala Ser Gln Val Cys Gly Pro Val Tyr			
	130	135	140
tgc ttc acc ccg agc cct gtt gtg gtg ggg acg acc gat cgg ttt ggt			480
Cys Phe Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Phe Gly			
145	150	155	160
gtc ccc acg tat aac tgg ggg gcg aac gac tcg gat gtg ctg att ctc			528
Val Pro Thr Tyr Asn Trp Gly Ala Asn Asp Ser Asp Val Leu Ile Leu			
	165	170	175
aac aac acg cgg ccg ccg cga ggc aac tgg ttc ggc tgt aca tgg atg			576
Asn Asn Thr Arg Pro Pro Arg Gly Asn Trp Phe Gly Cys Thr Trp Met			
	180	185	190
aat ggc act ggg ttc acc aag acg tgt ggg ggc ccc ccg tgc aac atc			624
Asn Gly Thr Gly Phe Thr Lys Thr Cys Gly Gly Pro Pro Cys Asn Ile			
	195	200	205
ggg ggg gcc ggc aac aac acc ttg acc tgc ccc act gac tgt ttt cgg			672
Gly Gly Ala Gly Asn Asn Thr Leu Thr Cys Pro Thr Asp Cys Phe Arg			
	210	215	220
aag cac ccc gag gcc acc tac gcc aga tgc ggt tct ggg ccc tgg ctg			720
Lys His Pro Glu Ala Thr Tyr Ala Arg Cys Gly Ser Gly Pro Trp Leu			
225	230	235	240
aca cct agg tgt atg gtt cat tac cca tat agg ctc tgg cac tac ccc			768
Thr Pro Arg Cys Met Val His Tyr Pro Tyr Arg Leu Trp His Tyr Pro			
	245	250	255
tgc act gtc aac ttc acc atc ttc aag gtt agg atg tac gtg ggg ggc			816
Cys Thr Val Asn Phe Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly			
	260	265	270
gtg gag cac agg ttc gaa gcc gca tgc aat tgg act cga gga gag cgt			864
Val Glu His Arg Phe Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg			
	275	280	285

tgt gac ttg gag gac agg gat aga tca gag ctt agc ccg ctg ctg ctg	912
Cys Asp Leu Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu	
290 295 300	

tct aca aca gag tgg cag agc tta att aat tag	945
Ser Thr Thr Glu Trp Gln Ser Leu Ile Asn	
305 310	

<210> 42

<211> 314

<212> PRT

<213> Hepatitis C virus

<400> 42

Met Val Gly Asn Trp Ala Lys Val Leu Val Val Met Leu Leu Phe Ala
1 5 10 15

Gly Val Asp Gly His Thr Arg Val Ser Gly Gly Ala Ala Ala Ser Asp
20 25 30

Thr Arg Gly Leu Val Ser Leu Phe Ser Pro Gly Ser Ala Gln Lys Ile
35 40 45

Gln Leu Val Asn Thr Asn Gly Ser Trp His Ile Asn Arg Thr Ala Leu
50 55 60

Asn Cys Asn Asp Ser Leu Gln Thr Gly Phe Phe Ala Ala Leu Phe Tyr
65 70 75 80

Lys His Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys
85 90 95

Arg Ser Ile Asp Lys Phe Ala Gln Gly Trp Gly Pro Leu Thr Tyr Thr
100 105 110

Glu Pro Asn Ser Ser Asp Gln Arg Pro Tyr Cys Trp His Tyr Ala Pro
115 120 125

Arg Pro Cys Gly Ile Val Pro Ala Ser Gln Val Cys Gly Pro Val Tyr
130 135 140

Cys Phe Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Phe Gly
145 150 155 160

Val Pro Thr Tyr Asn Trp Gly Ala Asn Asp Ser Asp Val Leu Ile Leu
165 170 175

Asn Asn Thr Arg Pro Pro Arg Gly Asn Trp Phe Gly Cys Thr Trp Met
180 185 190

Asn Gly Thr Gly Phe Thr Lys Thr Cys Gly Gly Pro Pro Cys Asn Ile
195 200 205

Gly Gly Ala Gly Asn Asn Thr Leu Thr Cys Pro Thr Asp Cys Phe Arg
210 215 220

Lys His Pro Glu Ala Thr Tyr Ala Arg Cys Gly Ser Gly Pro Trp Leu
 225 230 235 240
 Thr Pro Arg Cys Met Val His Tyr Pro Tyr Arg Leu Trp His Tyr Pro
 245 250 255
 Cys Thr Val Asn Phe Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly
 260 265 270
 Val Glu His Arg Phe Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg
 275 280 285
 Cys Asp Leu Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu
 290 295 300
 Ser Thr Thr Glu Trp Gln Ser Leu Ile Asn
 305 310

<210> 43

<211> 961

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..958

<220>

<221> mat_peptide

<222> 1..955

<400> 43

atg gtg ggg aac tgg gct aag gtt ttg gtt gtg atg cta ctc ttt gcc	48
Met Val Gly Asn Trp Ala Lys Val Leu Val Val Met Leu Leu Phe Ala	
1 5 10 15	
ggc gtc gac ggg cat acc cgc gtg tca gga ggg gca gca gcc tcc gat	96
Gly Val Asp Gly His Thr Arg Val Ser Gly Gly Ala Ala Ala Ser Asp	
20 25 30	
acc agg ggc ctt gtg tcc ctc ttt agc ccc ggg tcg gct cag aaa atc	144
Thr Arg Gly Leu Val Ser Leu Phe Ser Pro Gly Ser Ala Gln Lys Ile	
35 40 45	
cag ctc gta aac acc aac ggc agt tgg cac atc aac agg act gcc ctg	192
Gln Leu Val Asn Thr Asn Gly Ser Trp His Ile Asn Arg Thr Ala Leu	
50 55 60	
aac tgc aac gac tcc ctc caa aca ggg ttc ttt gcc gca cta ttc tac	240
Asn Cys Asn Asp Ser Leu Gln Thr Gly Phe Phe Ala Ala Leu Phe Tyr	
65 70 75 80	
aaa cac aaa ttc aac tcg tct gga tgc cca gag cgc ttg gcc agc tgt	288
Lys His Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys	

85										90					95					
cgc	tcc	atc	gac	aag	ttc	gct	cag	ggg	tgg	ggg	ccc	ctc	act	tac	act	336				
Arg	Ser	Ile	Asp	Lys	Phe	Ala	Gln	Gly	Trp	Gly	Pro	Leu	Thr	Tyr	Thr					
			100					105					110							
gag	cct	aac	agc	tcg	gac	cag	agg	ccc	tac	tgc	tgg	cac	tac	gcg	cct	384				
Glu	Pro	Asn	Ser	Ser	Asp	Gln	Arg	Pro	Tyr	Cys	Trp	His	Tyr	Ala	Pro					
		115					120					125								
cga	ccg	tgt	ggg	att	gta	ccc	gcg	tct	cag	gtg	tgc	ggg	cca	gtg	tat	432				
Arg	Pro	Cys	Gly	Ile	Val	Pro	Ala	Ser	Gln	Val	Cys	Gly	Pro	Val	Tyr					
	130					135					140									
tgc	ttc	acc	ccg	agc	cct	gtt	gtg	gtg	ggg	acg	acc	gat	cgg	ttt	ggg	480				
Cys	Phe	Thr	Pro	Ser	Pro	Val	Val	Val	Gly	Thr	Thr	Asp	Arg	Phe	Gly					
145					150				155						160					
gtc	ccc	acg	tat	aac	tgg	ggg	gcg	aac	gac	tcg	gat	gtg	ctg	att	ctc	528				
Val	Pro	Thr	Tyr	Asn	Trp	Gly	Ala	Asn	Asp	Ser	Asp	Val	Leu	Ile	Leu					
				165				170						175						
aac	aac	acg	cgg	ccg	ccg	cga	ggc	aac	tgg	ttc	ggc	tgt	aca	tgg	atg	576				
Asn	Asn	Thr	Arg	Pro	Pro	Arg	Gly	Asn	Trp	Phe	Gly	Cys	Thr	Trp	Met					
			180					185					190							
aat	ggc	act	ggg	ttc	acc	aag	acg	tgt	ggg	ggc	ccc	ccg	tgc	aac	atc	624				
Asn	Gly	Thr	Gly	Phe	Thr	Lys	Thr	Cys	Gly	Gly	Pro	Pro	Cys	Asn	Ile					
		195					200					205								
ggg	ggg	gcc	ggc	aac	aac	acc	ttg	acc	tgc	ccc	act	gac	tgt	ttt	cgg	672				
Gly	Gly	Ala	Gly	Asn	Asn	Thr	Leu	Thr	Cys	Pro	Thr	Asp	Cys	Phe	Arg					
	210					215					220									
aag	cac	ccc	gag	gcc	acc	tac	gcc	aga	tgc	ggg	tct	ggg	ccc	tgg	ctg	720				
Lys	His	Pro	Glu	Ala	Thr	Tyr	Ala	Arg	Cys	Gly	Ser	Gly	Pro	Trp	Leu					
225					230				235						240					
aca	cct	agg	tgt	atg	gtt	cat	tac	cca	tat	agg	ctc	tgg	cac	tac	ccc	768				
Thr	Pro	Arg	Cys	Met	Val	His	Tyr	Pro	Tyr	Arg	Leu	Trp	His	Tyr	Pro					
				245				250						255						
tgc	act	gtc	aac	ttc	acc	atc	ttc	aag	gtt	agg	atg	tac	gtg	ggg	ggc	816				
Cys	Thr	Val	Asn	Phe	Thr	Ile	Phe	Lys	Val	Arg	Met	Tyr	Val	Gly	Gly					
			260					265					270							
gtg	gag	cac	agg	ttc	gaa	gcc	gca	tgc	aat	tgg	act	cga	gga	gag	cgt	864				
Val	Glu	His	Arg	Phe	Glu	Ala	Ala	Cys	Asn	Trp	Thr	Arg	Gly	Glu	Arg					
		275					280					285								
tgt	gac	ttg	gag	gac	agg	gat	aga	tca	gag	ctt	agc	ccg	ctg	ctg	ctg	912				
Cys	Asp	Leu	Glu	Asp	Arg	Asp	Arg	Ser	Glu	Leu	Ser	Pro	Leu	Leu	Leu					
	290					295					300									
tct	aca	aca	ggg	gat	cga	ggg	cag	aca	cca	tca	cca	cca	tca	cta	a	958				
Ser	Thr	Thr	Gly	Asp	Arg	Gly	Gln	Thr	Pro	Ser	Pro	Pro	Ser	Leu						
305					310				315											

tag

<210> 44

<211> 319

<212> PRT

<213> Hepatitis C virus

<400> 44

Met Val Gly Asn Trp Ala Lys Val Leu Val Val Met Leu Leu Phe Ala
 1 5 10 15

Gly Val Asp Gly His Thr Arg Val Ser Gly Gly Ala Ala Ala Ser Asp
 20 25 30

Thr Arg Gly Leu Val Ser Leu Phe Ser Pro Gly Ser Ala Gln Lys Ile
 35 40 45

Gln Leu Val Asn Thr Asn Gly Ser Trp His Ile Asn Arg Thr Ala Leu
 50 55 60

Asn Cys Asn Asp Ser Leu Gln Thr Gly Phe Phe Ala Ala Leu Phe Tyr
 65 70 75 80

Lys His Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys
 85 90 95

Arg Ser Ile Asp Lys Phe Ala Gln Gly Trp Gly Pro Leu Thr Tyr Thr
 100 105 110

Glu Pro Asn Ser Ser Asp Gln Arg Pro Tyr Cys Trp His Tyr Ala Pro
 115 120 125

Arg Pro Cys Gly Ile Val Pro Ala Ser Gln Val Cys Gly Pro Val Tyr
 130 135 140

Cys Phe Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Phe Gly
 145 150 155 160

Val Pro Thr Tyr Asn Trp Gly Ala Asn Asp Ser Asp Val Leu Ile Leu
 165 170 175

Asn Asn Thr Arg Pro Pro Arg Gly Asn Trp Phe Gly Cys Thr Trp Met
 180 185 190

Asn Gly Thr Gly Phe Thr Lys Thr Cys Gly Gly Pro Pro Cys Asn Ile
 195 200 205

Gly Gly Ala Gly Asn Asn Thr Leu Thr Cys Pro Thr Asp Cys Phe Arg
 210 215 220

Lys His Pro Glu Ala Thr Tyr Ala Arg Cys Gly Ser Gly Pro Trp Leu
 225 230 235 240

Thr Pro Arg Cys Met Val His Tyr Pro Tyr Arg Leu Trp His Tyr Pro

				245						250						255			
Cys	Thr	Val	Asn	Phe	Thr	Ile	Phe	Lys	Val	Arg	Met	Tyr	Val	Gly	Gly				
			260					265					270						
Val	Glu	His	Arg	Phe	Glu	Ala	Ala	Cys	Asn	Trp	Thr	Arg	Gly	Glu	Arg				
		275					280					285							
Cys	Asp	Leu	Glu	Asp	Arg	Asp	Arg	Ser	Glu	Leu	Ser	Pro	Leu	Leu	Leu				
	290					295					300								
Ser	Thr	Thr	Gly	Asp	Arg	Gly	Gln	Thr	Pro	Ser	Pro	Pro	Ser	Leu					
305					310					315									

<210> 45

<211> 1395

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..1392

<220>

<221> mat_peptide

<222> 1..1389

<400> 45

atg	gtg	gcg	ggg	gcc	cat	tgg	gga	gtc	ctg	gcg	ggc	ctc	gcc	tac	tat		48
Met	Val	Ala	Gly	Ala	His	Trp	Gly	Val	Leu	Ala	Gly	Leu	Ala	Tyr	Tyr		
1				5				10					15				

tcc	atg	gtg	ggg	aac	tgg	gct	aag	gtt	ttg	gtt	gtg	atg	cta	ctc	ttt		96
Ser	Met	Val	Gly	Asn	Trp	Ala	Lys	Val	Leu	Val	Val	Met	Leu	Leu	Phe		
		20					25					30					

gcc	ggc	gtc	gac	ggg	cat	acc	cgc	gtg	tca	gga	ggg	gca	gca	gcc	tcc		144
Ala	Gly	Val	Asp	Gly	His	Thr	Arg	Val	Ser	Gly	Gly	Ala	Ala	Ala	Ser		
		35					40					45					

gat	acc	agg	ggc	ctt	gtg	tcc	ctc	ttt	agc	ccc	ggg	tcg	gct	cag	aaa		192
Asp	Thr	Arg	Gly	Leu	Val	Ser	Leu	Phe	Ser	Pro	Gly	Ser	Ala	Gln	Lys		
	50					55					60						

atc	cag	ctc	gta	aac	acc	aac	ggc	agt	tgg	cac	atc	aac	agg	act	gcc		240
Ile	Gln	Leu	Val	Asn	Thr	Asn	Gly	Ser	Trp	His	Ile	Asn	Arg	Thr	Ala		
65				70				75						80			

ctg	aac	tgc	aac	gac	tcc	ctc	caa	aca	ggg	ttc	ttt	gcc	gca	cta	ttc		288
Leu	Asn	Cys	Asn	Asp	Ser	Leu	Gln	Thr	Gly	Phe	Phe	Ala	Ala	Leu	Phe		
			85					90						95			

tac	aaa	cac	aaa	ttc	aac	tcg	tct	gga	tgc	cca	gag	cgc	ttg	gcc	agc		336
Tyr	Lys	His	Lys	Phe	Asn	Ser	Ser	Gly	Cys	Pro	Glu	Arg	Leu	Ala	Ser		
			100					105						110			

tgt cgc tcc atc gac aag ttc gct cag ggg tgg ggt ccc ctc act tac	384
Cys Arg Ser Ile Asp Lys Phe Ala Gln Gly Trp Gly Pro Leu Thr Tyr	
115 120 125	
act gag cct aac agc tcg gac cag agg ccc tac tgc tgg cac tac gcg	432
Thr Glu Pro Asn Ser Ser Asp Gln Arg Pro Tyr Cys Trp His Tyr Ala	
130 135 140	
cct cga ccg tgt ggt att gta ccc gcg tct cag gtg tgc ggt cca gtg	480
Pro Arg Pro Cys Gly Ile Val Pro Ala Ser Gln Val Cys Gly Pro Val	
145 150 155 160	
tat tgc ttc acc ccg agc cct gtt gtg gtg ggg acg acc gat cgg ttt	528
Tyr Cys Phe Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Phe	
165 170 175	
ggg gtc ccc acg tat aac tgg ggg gcg aac gac tcg gat gtg ctg att	576
Gly Val Pro Thr Tyr Asn Trp Gly Ala Asn Asp Ser Asp Val Leu Ile	
180 185 190	
ctc aac aac acg cgg ccg ccg cga ggc aac tgg ttc ggc tgt aca tgg	624
Leu Asn Asn Thr Arg Pro Pro Arg Gly Asn Trp Phe Gly Cys Thr Trp	
195 200 205	
atg aat ggc act ggg ttc acc aag acg tgt ggg ggc ccc ccg tgc aac	672
Met Asn Gly Thr Gly Phe Thr Lys Thr Cys Gly Gly Pro Pro Cys Asn	
210 215 220	
atc ggg ggg gcc ggc aac aac acc ttg acc tgc ccc act gac tgt ttt	720
Ile Gly Gly Ala Gly Asn Asn Thr Leu Thr Cys Pro Thr Asp Cys Phe	
225 230 235 240	
cgg aag cac ccc gag gcc acc tac gcc aga tgc ggt tct ggg ccc tgg	768
Arg Lys His Pro Glu Ala Thr Tyr Ala Arg Cys Gly Ser Gly Pro Trp	
245 250 255	
ctg aca cct agg tgt atg gtt cat tac cca tat agg ctc tgg cac tac	816
Leu Thr Pro Arg Cys Met Val His Tyr Pro Tyr Arg Leu Trp His Tyr	
260 265 270	
ccc tgc act gtc aac ttc acc atc ttc aag gtt agg atg tac gtg ggg	864
Pro Cys Thr Val Asn Phe Thr Ile Phe Lys Val Arg Met Tyr Val Gly	
275 280 285	
ggc gtg gag cac agg ttc gaa gcc gca tgc aat tgg act cga gga gag	912
Gly Val Glu His Arg Phe Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu	
290 295 300	
cgt tgt gac ttg gag gac agg gat aga tca gag ctt agc ccg ctg ctg	960
Arg Cys Asp Leu Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu	
305 310 315 320	
ctg tct aca aca gag tgg cag ata ctg ccc tgt tcc ttc acc acc ctg	1008
Leu Ser Thr Thr Glu Trp Gln Ile Leu Pro Cys Ser Phe Thr Thr Leu	
325 330 335	

ccg gcc cta tcc acc ggc ctg atc cac ctc cat cag aac atc gtg gac 1056
 Pro Ala Leu Ser Thr Gly Leu Ile His Leu His Gln Asn Ile Val Asp
 340 345 350

gtg caa tac ctg tac ggt gta ggg tcg gcg gtt gtc tcc ctt gtc atc 1104
 Val Gln Tyr Leu Tyr Gly Val Gly Ser Ala Val Val Ser Leu Val Ile
 355 360 365

aaa tgg gag tat gtc ctg ttg ctc ttc ctt ctc ctg gca gac gcg cgc 1152
 Lys Trp Glu Tyr Val Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg
 370 375 380

atc tgc gcc tgc tta tgg atg atg ctg ctg ata gct caa gct gag gcc 1200
 Ile Cys Ala Cys Leu Trp Met Met Leu Leu Ile Ala Gln Ala Glu Ala
 385 390 395 400

gcc tta gag aac ctg gtg gtc ctc aat gcg gcg gcc gtg gcc ggg gcg 1248
 Ala Leu Glu Asn Leu Val Val Leu Asn Ala Ala Ala Val Ala Gly Ala
 405 410 415

cat ggc act ctt tcc ttc ctt gtg ttc ttc tgt gct gcc tgg tac atc 1296
 His Gly Thr Leu Ser Phe Leu Val Phe Phe Cys Ala Ala Trp Tyr Ile
 420 425 430

aag ggc agg ctg gtc cct ggt gcg gca tac gcc ttc tat ggc gtg tgg 1344
 Lys Gly Arg Leu Val Pro Gly Ala Ala Tyr Ala Phe Tyr Gly Val Trp
 435 440 445

ccg ctg ctc ctg ctt ctg ctg gcc tta cca cca cga gct tat gcc tagtaa 1395
 Pro Leu Leu Leu Leu Leu Leu Ala Leu Pro Pro Arg Ala Tyr Ala
 450 455 460

<210> 46

<211> 463

<212> PRT

<213> Hepatitis C virus

<400> 46

Met Val Ala Gly Ala His Trp Gly Val Leu Ala Gly Leu Ala Tyr Tyr
 1 5 10 15

Ser Met Val Gly Asn Trp Ala Lys Val Leu Val Val Met Leu Leu Phe
 20 25 30

Ala Gly Val Asp Gly His Thr Arg Val Ser Gly Gly Ala Ala Ala Ser
 35 40 45

Asp Thr Arg Gly Leu Val Ser Leu Phe Ser Pro Gly Ser Ala Gln Lys
 50 55 60

Ile Gln Leu Val Asn Thr Asn Gly Ser Trp His Ile Asn Arg Thr Ala
 65 70 75 80

Leu Asn Cys Asn Asp Ser Leu Gln Thr Gly Phe Phe Ala Ala Leu Phe
 85 90 95

Tyr	Lys	His	Lys	Phe	Asn	Ser	Ser	Gly	Cys	Pro	Glu	Arg	Leu	Ala	Ser		
			100					105					110				
Cys	Arg	Ser	Ile	Asp	Lys	Phe	Ala	Gln	Gly	Trp	Gly	Pro	Leu	Thr	Tyr		
		115					120					125					
Thr	Glu	Pro	Asn	Ser	Ser	Asp	Gln	Arg	Pro	Tyr	Cys	Trp	His	Tyr	Ala		
	130					135					140						
Pro	Arg	Pro	Cys	Gly	Ile	Val	Pro	Ala	Ser	Gln	Val	Cys	Gly	Pro	Val		
145					150					155					160		
Tyr	Cys	Phe	Thr	Pro	Ser	Pro	Val	Val	Val	Gly	Thr	Thr	Asp	Arg	Phe		
				165						170				175			
Gly	Val	Pro	Thr	Tyr	Asn	Trp	Gly	Ala	Asn	Asp	Ser	Asp	Val	Leu	Ile		
			180					185					190				
Leu	Asn	Asn	Thr	Arg	Pro	Pro	Arg	Gly	Asn	Trp	Phe	Gly	Cys	Thr	Trp		
		195					200					205					
Met	Asn	Gly	Thr	Gly	Phe	Thr	Lys	Thr	Cys	Gly	Gly	Pro	Pro	Cys	Asn		
	210					215					220						
Ile	Gly	Gly	Ala	Gly	Asn	Asn	Thr	Leu	Thr	Cys	Pro	Thr	Asp	Cys	Phe		
225					230					235					240		
Arg	Lys	His	Pro	Glu	Ala	Thr	Tyr	Ala	Arg	Cys	Gly	Ser	Gly	Pro	Trp		
				245					250					255			
Leu	Thr	Pro	Arg	Cys	Met	Val	His	Tyr	Pro	Tyr	Arg	Leu	Trp	His	Tyr		
			260					265					270				
Pro	Cys	Thr	Val	Asn	Phe	Thr	Ile	Phe	Lys	Val	Arg	Met	Tyr	Val	Gly		
		275					280					285					
Gly	Val	Glu	His	Arg	Phe	Glu	Ala	Ala	Cys	Asn	Trp	Thr	Arg	Gly	Glu		
	290					295					300						
Arg	Cys	Asp	Leu	Glu	Asp	Arg	Asp	Arg	Ser	Glu	Leu	Ser	Pro	Leu	Leu		
305					310					315					320		
Leu	Ser	Thr	Thr	Glu	Trp	Gln	Ile	Leu	Pro	Cys	Ser	Phe	Thr	Thr	Leu		
				325					330					335			
Pro	Ala	Leu	Ser	Thr	Gly	Leu	Ile	His	Leu	His	Gln	Asn	Ile	Val	Asp		
			340					345					350				
Val	Gln	Tyr	Leu	Tyr	Gly	Val	Gly	Ser	Ala	Val	Val	Ser	Leu	Val	Ile		
		355					360					365					
Lys	Trp	Glu	Tyr	Val	Leu	Leu	Leu	Phe	Leu	Leu	Leu	Ala	Asp	Ala	Arg		
	370					375						380					
Ile	Cys	Ala	Cys	Leu	Trp	Met	Met	Leu	Leu	Ile	Ala	Gln	Ala	Glu	Ala		
385					390					395					400		

Ala Leu Glu Asn Leu Val Val Leu Asn Ala Ala Ala Val Ala Gly Ala
405 410 415

His Gly Thr Leu Ser Phe Leu Val Phe Phe Cys Ala Ala Trp Tyr Ile
420 425 430

Lys Gly Arg Leu Val Pro Gly Ala Ala Tyr Ala Phe Tyr Gly Val Trp
435 440 445

Pro Leu Leu Leu Leu Leu Leu Ala Leu Pro Pro Arg Ala Tyr Ala
450 455 460

<210> 47

<211> 2082

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..2079

<220>

<221> mat_peptide

<222> 1..2076

<400> 47

aat ttg ggt aag gtc atc gat acc ctt aca tgc ggc ttc gcc gac ctc	48
Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu	
1 5 10 15	
gtg ggg tac att ccg ctc gtc ggc gcc ccc cta ggg ggc gct gcc agg	96
Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg	
20 25 30	
gcc ctg gcg cat ggc gtc cgg gtt ctg gag gac ggc gtg aac tat gca	144
Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala	
35 40 45	
aca ggg aat ttg ccc ggt tgc tct ttc tct atc ttc ctc ttg gct ttg	192
Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu	
50 55 60	
ctg tcc tgt ctg acc gtt cca gct tcc gct tat gaa gtg cgc aac gtg	240
Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val	
65 70 75 80	
tcc ggg atg tac cat gtc acg aac gac tgc tcc aac tca agc att gtg	288
Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val	
85 90 95	
tat gag gca gcg gac atg atc atg cac acc ccc ggg tgc gtg ccc tgc	336
Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys	
100 105 110	
gtt cgg gag aac aac tct tcc cgc tgc tgg gta gcg ctc acc ccc acg	384

Val	Arg	Glu	Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	Ala	Leu	Thr	Pro	Thr		
		115					120					125					
ctc	gca	gct	agg	aac	gcc	agc	gtc	ccc	acc	acg	aca	ata	cga	cgc	cac		432
Leu	Ala	Ala	Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	Thr	Ile	Arg	Arg	His		
		130					135					140					
gtc	gat	ttg	ctc	gtt	ggg	gcg	gct	gct	ttc	tgt	tcc	gct	atg	tac	gtg		480
Val	Asp	Leu	Leu	Val	Gly	Ala	Ala	Ala	Phe	Cys	Ser	Ala	Met	Tyr	Val		
		145				150				155					160		
ggg	gac	ctc	tgc	gga	tct	gtc	ttc	ctc	gtc	tcc	cag	ctg	ttc	acc	atc		528
Gly	Asp	Leu	Cys	Gly	Ser	Val	Phe	Leu	Val	Ser	Gln	Leu	Phe	Thr	Ile		
				165						170					175		
tcg	cct	cgc	cgg	cat	gag	acg	gtg	cag	gac	tgc	aat	tgc	tca	atc	tat		576
Ser	Pro	Arg	Arg	His	Glu	Thr	Val	Gln	Asp	Cys	Asn	Cys	Ser	Ile	Tyr		
			180					185					190				
ccc	ggc	cac	ata	acg	ggc	cac	cgt	atg	gct	tgg	gat	atg	atg	atg	aac		624
Pro	Gly	His	Ile	Thr	Gly	His	Arg	Met	Ala	Trp	Asp	Met	Met	Met	Asn		
		195					200					205					
tgg	tcg	cct	aca	acg	gcc	ctg	gtg	gta	tcg	cag	ctg	ctc	cgg	atc	cca		672
Trp	Ser	Pro	Thr	Thr	Ala	Leu	Val	Val	Ser	Gln	Leu	Leu	Arg	Ile	Pro		
		210				215					220						
caa	gct	gtc	gtg	gac	atg	gtg	gcg	ggg	gcc	cat	tgg	gga	gtc	ctg	gcg		720
Gln	Ala	Val	Val	Asp	Met	Val	Ala	Gly	Ala	His	Trp	Gly	Val	Leu	Ala		
		225			230					235					240		
ggc	ctc	gcc	tac	tat	tcc	atg	gtg	ggg	aac	tgg	gct	aag	gtt	ttg	gtt		768
Gly	Leu	Ala	Tyr	Tyr	Ser	Met	Val	Gly	Asn	Trp	Ala	Lys	Val	Leu	Val		
				245					250					255			
gtg	atg	cta	ctc	ttt	gcc	ggc	gtc	gac	ggg	cat	acc	cgc	gtg	tca	gga		816
Val	Met	Leu	Leu	Phe	Ala	Gly	Val	Asp	Gly	His	Thr	Arg	Val	Ser	Gly		
			260					265					270				
ggg	gca	gca	gcc	tcc	gat	acc	agg	ggc	ctt	gtg	tcc	ctc	ttt	agc	ccc		864
Gly	Ala	Ala	Ala	Ser	Asp	Thr	Arg	Gly	Leu	Val	Ser	Leu	Phe	Ser	Pro		
		275					280					285					
ggg	tcg	gct	cag	aaa	atc	cag	ctc	gta	aac	acc	aac	ggc	agt	tgg	cac		912
Gly	Ser	Ala	Gln	Lys	Ile	Gln	Leu	Val	Asn	Thr	Asn	Gly	Ser	Trp	His		
		290				295					300						
atc	aac	agg	act	gcc	ctg	aac	tgc	aac	gac	tcc	ctc	caa	aca	ggg	ttc		960
Ile	Asn	Arg	Thr	Ala	Leu	Asn	Cys	Asn	Asp	Ser	Leu	Gln	Thr	Gly	Phe		
				305		310				315					320		
ttt	gcc	gca	cta	ttc	tac	aaa	cac	aaa	ttc	aac	tcg	tct	gga	tgc	cca		1008
Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe	Asn	Ser	Ser	Gly	Cys	Pro		
				325					330					335			
gag	cgc	ttg	gcc	agc	tgt	cgc	tcc	atc	gac	aag	ttc	gct	cag	ggg	tgg		1056
Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp	Lys	Phe	Ala	Gln	Gly	Trp		

340						345						350						
ggt	ccc	ctc	act	tac	act	gag	cct	aac	agc	tcg	gac	cag	agg	ccc	tac	1104		
Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser	Ser	Asp	Gln	Arg	Pro	Tyr			
		355					360					365						
tgc	tgg	cac	tac	gcg	cct	cga	ccg	tgt	ggt	att	gta	ccc	gcg	tct	cag	1152		
Cys	Trp	His	Tyr	Ala	Pro	Arg	Pro	Cys	Gly	Ile	Val	Pro	Ala	Ser	Gln			
	370					375					380							
gtg	tgc	ggt	cca	gtg	tat	tgc	ttc	acc	ccg	agc	cct	gtt	gtg	gtg	ggg	1200		
Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro	Ser	Pro	Val	Val	Val	Gly			
385					390					395					400			
acg	acc	gat	cgg	ttt	ggt	gtc	ccc	acg	tat	aac	tgg	ggg	gcg	aac	gac	1248		
Thr	Thr	Asp	Arg	Phe	Gly	Val	Pro	Thr	Tyr	Asn	Trp	Gly	Ala	Asn	Asp			
				405					410					415				
tcg	gat	gtg	ctg	att	ctc	aac	aac	acg	cgg	ccg	ccg	cga	ggc	aac	tgg	1296		
Ser	Asp	Val	Leu	Ile	Leu	Asn	Asn	Thr	Arg	Pro	Pro	Arg	Gly	Asn	Trp			
			420					425					430					
ttc	ggc	tgt	aca	tgg	atg	aat	ggc	act	ggg	ttc	acc	aag	acg	tgt	ggg	1344		
Phe	Gly	Cys	Thr	Trp	Met	Asn	Gly	Thr	Gly	Phe	Thr	Lys	Thr	Cys	Gly			
		435					440					445						
ggc	ccc	ccg	tgc	aac	atc	ggg	ggg	gcc	ggc	aac	aac	acc	ttg	acc	tgc	1392		
Gly	Pro	Pro	Cys	Asn	Ile	Gly	Gly	Ala	Gly	Asn	Asn	Thr	Leu	Thr	Cys			
	450					455					460							
ccc	act	gac	tgt	ttt	cgg	aag	cac	ccc	gag	gcc	acc	tac	gcc	aga	tgc	1440		
Pro	Thr	Asp	Cys	Phe	Arg	Lys	His	Pro	Glu	Ala	Thr	Tyr	Ala	Arg	Cys			
465					470					475					480			
ggt	tct	ggg	ccc	tgg	ctg	aca	cct	agg	tgt	atg	gtt	cat	tac	cca	tat	1488		
Gly	Ser	Gly	Pro	Trp	Leu	Thr	Pro	Arg	Cys	Met	Val	His	Tyr	Pro	Tyr			
				485					490					495				
agg	ctc	tgg	cac	tac	ccc	tgc	act	gtc	aac	ttc	acc	atc	ttc	aag	gtt	1536		
Arg	Leu	Trp	His	Tyr	Pro	Cys	Thr	Val	Asn	Phe	Thr	Ile	Phe	Lys	Val			
			500					505					510					
agg	atg	tac	gtg	ggg	ggc	gtg	gag	cac	agg	ttc	gaa	gcc	gca	tgc	aat	1584		
Arg	Met	Tyr	Val	Gly	Gly	Val	Glu	His	Arg	Phe	Glu	Ala	Ala	Cys	Asn			
		515					520					525						
tgg	act	cga	gga	gag	cgt	tgt	gac	ttg	gag	gac	agg	gat	aga	tca	gag	1632		
Trp	Thr	Arg	Gly	Glu	Arg	Cys	Asp	Leu	Glu	Asp	Arg	Asp	Arg	Ser	Glu			
		530				535					540							
ctt	agc	ccg	ctg	ctg	ctg	tct	aca	aca	gag	tgg	cag	ata	ctg	ccc	tgt	1680		
Leu	Ser	Pro	Leu	Leu	Leu	Ser	Thr	Thr	Glu	Trp	Gln	Ile	Leu	Pro	Cys			
545					550					555					560			
tcc	ttc	acc	acc	ctg	ccg	gcc	cta	tcc	acc	ggc	ctg	atc	cac	ctc	cat	1728		
Ser	Phe	Thr	Thr	Leu	Pro	Ala	Leu	Ser	Thr	Gly	Leu	Ile	His	Leu	His			
				565					570					575				

cag aac atc gtg gac gtg caa tac ctg tac ggt gta ggg tcg gcg gtt	1776
Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly Val Gly Ser Ala Val	
580 585 590	

gtc tcc ctt gtc atc aaa tgg gag tat gtc ctg ttg ctc ttc ctt ctc	1824
Val Ser Leu Val Ile Lys Trp Glu Tyr Val Leu Leu Leu Phe Leu Leu	
595 600 605	

ctg gca gac gcg cgc atc tgc gcc tgc tta tgg atg atg ctg ctg ata	1872
Leu Ala Asp Ala Arg Ile Cys Ala Cys Leu Trp Met Met Leu Leu Ile	
610 615 620	

gct caa gct gag gcc gcc tta gag aac ctg gtg gtc ctc aat gcg gcg	1920
Ala Gln Ala Glu Ala Ala Leu Glu Asn Leu Val Val Leu Asn Ala Ala	
625 630 635 640	

gcc gtg gcc ggg gcg cat ggc act ctt tcc ttc ctt gtg ttc ttc tgt	1968
Ala Val Ala Gly Ala His Gly Thr Leu Ser Phe Leu Val Phe Phe Cys	
645 650 655	

gct gcc tgg tac atc aag ggc agg ctg gtc cct ggt gcg gca tac gcc	2016
Ala Ala Trp Tyr Ile Lys Gly Arg Leu Val Pro Gly Ala Ala Tyr Ala	
660 665 670	

ttc tat ggc gtg tgg ccg ctg ctc ctg ctt ctg ctg gcc tta cca cca	2064
Phe Tyr Gly Val Trp Pro Leu Leu Leu Leu Leu Ala Leu Pro Pro	
675 680 685	

cga gct tat gcc tagtaa	2082
Arg Ala Tyr Ala	
690	

<210> 48

<211> 692

<212> PRT

<213> Hepatitis C virus

<400> 48

Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
1 5 10 15

Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
20 25 30

Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
35 40 45

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
50 55 60

Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Glu Val Arg Asn Val
65 70 75 80

Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser Asn Ser Ser Ile Val

85

90

95

Tyr	Glu	Ala	Ala	Asp	Met	Ile	Met	His	Thr	Pro	Gly	Cys	Val	Pro	Cys			
			100					105					110					
Val	Arg	Glu	Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	Ala	Leu	Thr	Pro	Thr			
		115					120					125						
Leu	Ala	Ala	Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	Thr	Ile	Arg	Arg	His			
		130				135					140							
Val	Asp	Leu	Leu	Val	Gly	Ala	Ala	Ala	Phe	Cys	Ser	Ala	Met	Tyr	Val			
145					150					155					160			
Gly	Asp	Leu	Cys	Gly	Ser	Val	Phe	Leu	Val	Ser	Gln	Leu	Phe	Thr	Ile			
				165					170					175				
Ser	Pro	Arg	Arg	His	Glu	Thr	Val	Gln	Asp	Cys	Asn	Cys	Ser	Ile	Tyr			
			180					185					190					
Pro	Gly	His	Ile	Thr	Gly	His	Arg	Met	Ala	Trp	Asp	Met	Met	Met	Asn			
		195					200					205						
Trp	Ser	Pro	Thr	Thr	Ala	Leu	Val	Val	Ser	Gln	Leu	Leu	Arg	Ile	Pro			
		210				215					220							
Gln	Ala	Val	Val	Asp	Met	Val	Ala	Gly	Ala	His	Trp	Gly	Val	Leu	Ala			
225					230					235					240			
Gly	Leu	Ala	Tyr	Tyr	Ser	Met	Val	Gly	Asn	Trp	Ala	Lys	Val	Leu	Val			
				245					250					255				
Val	Met	Leu	Leu	Phe	Ala	Gly	Val	Asp	Gly	His	Thr	Arg	Val	Ser	Gly			
			260					265					270					
Gly	Ala	Ala	Ala	Ser	Asp	Thr	Arg	Gly	Leu	Val	Ser	Leu	Phe	Ser	Pro			
		275					280					285						
Gly	Ser	Ala	Gln	Lys	Ile	Gln	Leu	Val	Asn	Thr	Asn	Gly	Ser	Trp	His			
		290				295					300							
Ile	Asn	Arg	Thr	Ala	Leu	Asn	Cys	Asn	Asp	Ser	Leu	Gln	Thr	Gly	Phe			
305					310					315					320			
Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe	Asn	Ser	Ser	Gly	Cys	Pro			
				325					330					335				
Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp	Lys	Phe	Ala	Gln	Gly	Trp			
			340					345					350					
Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser	Ser	Asp	Gln	Arg	Pro	Tyr			
		355					360					365						
Cys	Trp	His	Tyr	Ala	Pro	Arg	Pro	Cys	Gly	Ile	Val	Pro	Ala	Ser	Gln			
		370				375					380							
Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro	Ser	Pro	Val	Val	Val	Gly			
385					390					395					400			

Thr Thr Asp Arg Phe Gly Val Pro Thr Tyr Asn Trp Gly Ala Asn Asp
 405 410 415
 Ser Asp Val Leu Ile Leu Asn Asn Thr Arg Pro Pro Arg Gly Asn Trp
 420 425 430
 Phe Gly Cys Thr Trp Met Asn Gly Thr Gly Phe Thr Lys Thr Cys Gly
 435 440 445
 Gly Pro Pro Cys Asn Ile Gly Gly Ala Gly Asn Asn Thr Leu Thr Cys
 450 455 460
 Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr Ala Arg Cys
 465 470 475 480
 Gly Ser Gly Pro Trp Leu Thr Pro Arg Cys Met Val His Tyr Pro Tyr
 485 490 495
 Arg Leu Trp His Tyr Pro Cys Thr Val Asn Phe Thr Ile Phe Lys Val
 500 505 510
 Arg Met Tyr Val Gly Gly Val Glu His Arg Phe Glu Ala Ala Cys Asn
 515 520 525
 Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp Arg Ser Glu
 530 535 540
 Leu Ser Pro Leu Leu Leu Ser Thr Thr Glu Trp Gln Ile Leu Pro Cys
 545 550 555 560
 Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly Leu Ile His Leu His
 565 570 575
 Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly Val Gly Ser Ala Val
 580 585 590
 Val Ser Leu Val Ile Lys Trp Glu Tyr Val Leu Leu Leu Phe Leu Leu
 595 600 605
 Leu Ala Asp Ala Arg Ile Cys Ala Cys Leu Trp Met Met Leu Leu Ile
 610 615 620
 Ala Gln Ala Glu Ala Ala Leu Glu Asn Leu Val Val Leu Asn Ala Ala
 625 630 635 640
 Ala Val Ala Gly Ala His Gly Thr Leu Ser Phe Leu Val Phe Phe Cys
 645 650 655
 Ala Ala Trp Tyr Ile Lys Gly Arg Leu Val Pro Gly Ala Ala Tyr Ala
 660 665 670
 Phe Tyr Gly Val Trp Pro Leu Leu Leu Leu Leu Leu Ala Leu Pro Pro
 675 680 685
 Arg Ala Tyr Ala
 690

<210> 49

<211> 2433

<212> DNA

<213> Hepatitis C virus

<220>

<221> CDS

<222> 1..2430

<220>

<221> mat_peptide

<222> 1..2427

<400> 49

atg agc acg aat cct aaa cct caa aga aaa acc aaa cgt aac acc aac	48
Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn	
1 5 10 15	

cgc cgc cca cag gac gtc aag ttc ccg ggc ggt ggt cag atc gtt ggt	96
Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly	
20 25 30	

gga gtt tac ctg ttg ccg cgc agg ggc ccc agg ttg ggt gtg cgc gcg	144
Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala	
35 40 45	

act agg aag act tcc gag cgc tgc caa cct cgt ggg agg cga caa cct	192
Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro	
50 55 60	

atc ccc aag gct cgc cga ccc gag ggt agg gcc tgg gct cag ccc ggg	240
Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Ala Trp Ala Gln Pro Gly	
65 70 75 80	

tac cct tgg ccc ctc tat ggc aat gag ggc atg ggg tgg gca gga tgg	288
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Met Gly Trp Ala Gly Trp	
85 90 95	

ctc ctg tca ccc cgc ggc tct cgc cct agt tgg ggc cct aca gac ccc	336
Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro	
100 105 110	

cgg cgt agg tgc cgt aat ttg ggt aag gtc atc gat acc ctt aca tgc	384
Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys	
115 120 125	

ggc ttc gcc gac ctc gtg ggg tac att ccg ctc gtc ggc gcc ccc cta	432
Gly Phe Ala Asp Leu Val Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu	
130 135 140	

ggg ggc gct gcc agg gcc ctg gcg cat ggc gtc cgg gtt ctg gag gac	480
Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp	
145 150 155 160	

ggc gtg aac tat gca aca ggg aat ttg ccc ggt tgc tct ttc tct atc Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile 165 170 175	528
ttc ctc ttg gct ttg ctg tcc tgt ctg acc gtt cca gct tcc gct tat Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr 180 185 190	576
gaa gtg cgc aac gtg tcc ggg atg tac cat gtc acg aac gac tgc tcc Glu Val Arg Asn Val Ser Gly Met Tyr His Val Thr Asn Asp Cys Ser 195 200 205	624
aac tca agc att gtg tat gag gca gcg gac atg atc atg cac acc ccc Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Met Ile Met His Thr Pro 210 215 220	672
ggg tgc gtg ccc tgc gtt cgg gag aac aac tct tcc cgc tgc tgg gta Gly Cys Val Pro Cys Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val 225 230 235 240	720
gcg ctc acc ccc acg ctc gca gct agg aac gcc agc gtc ccc acc acg Ala Leu Thr Pro Thr Leu Ala Ala Arg Asn Ala Ser Val Pro Thr Thr 245 250 255	768
aca ata cga cgc cac gtc gat ttg ctc gtt ggg gcg gct gct ttc tgt Thr Ile Arg Arg His Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys 260 265 270	816
tcc gct atg tac gtg ggg gac ctc tgc gga tct gtc ttc ctc gtc tcc Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser 275 280 285	864
cag ctg ttc acc atc tcg cct cgc cgg cat gag acg gtg cag gac tgc Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val Gln Asp Cys 290 295 300	912
aat tgc tca atc tat ccc ggc cac ata acg ggt cac cgt atg gct tgg Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Ala Trp 305 310 315 320	960
gat atg atg atg aac tgg tcg cct aca acg gcc ctg gtg gta tcg cag Asp Met Met Met Asn Trp Ser Pro Thr Thr Ala Leu Val Val Ser Gln 325 330 335	1008
ctg ctc cgg atc cca caa gct gtc gtg gac atg gtg gcg ggg gcc cat Leu Leu Arg Ile Pro Gln Ala Val Val Asp Met Val Ala Gly Ala His 340 345 350	1056
tgg gga gtc ctg gcg ggc ctc gcc tac tat tcc atg gtg ggg aac tgg Trp Gly Val Leu Ala Gly Leu Ala Tyr Tyr Ser Met Val Gly Asn Trp 355 360 365	1104
gct aag gtt ttg gtt gtg atg cta ctc ttt gcc ggc gtc gac ggg cat Ala Lys Val Leu Val Val Met Leu Leu Phe Ala Gly Val Asp Gly His 370 375 380	1152
acc cgc gtg tca gga ggg gca gca gcc tcc gat acc agg ggc ctt gtg	1200

Thr	Arg	Val	Ser	Gly	Gly	Ala	Ala	Ala	Ser	Asp	Thr	Arg	Gly	Leu	Val		
385					390					395					400		
tcc	ctc	ttt	agc	ccc	ggg	tcg	gct	cag	aaa	atc	cag	ctc	gta	aac	acc		1248
Ser	Leu	Phe	Ser	Pro	Gly	Ser	Ala	Gln	Lys	Ile	Gln	Leu	Val	Asn	Thr		
				405					410					415			
aac	ggc	agt	tgg	cac	atc	aac	agg	act	gcc	ctg	aac	tgc	aac	gac	tcc		1296
Asn	Gly	Ser	Trp	His	Ile	Asn	Arg	Thr	Ala	Leu	Asn	Cys	Asn	Asp	Ser		
			420					425					430				
ctc	caa	aca	ggg	ttc	ttt	gcc	gca	cta	ttc	tac	aaa	cac	aaa	ttc	aac		1344
Leu	Gln	Thr	Gly	Phe	Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe	Asn		
			435				440					445					
tcg	tct	gga	tgc	cca	gag	cgc	ttg	gcc	agc	tgt	cgc	tcc	atc	gac	aag		1392
Ser	Ser	Gly	Cys	Pro	Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp	Lys		
		450				455					460						
ttc	gct	cag	ggg	tgg	ggg	ccc	ctc	act	tac	act	gag	cct	aac	agc	tcg		1440
Phe	Ala	Gln	Gly	Trp	Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser	Ser		
465					470					475					480		
gac	cag	agg	ccc	tac	tgc	tgg	cac	tac	gcg	cct	cga	ccg	tgt	ggg	att		1488
Asp	Gln	Arg	Pro	Tyr	Cys	Trp	His	Tyr	Ala	Pro	Arg	Pro	Cys	Gly	Ile		
				485					490					495			
gta	ccc	gcg	tct	cag	gtg	tgc	ggg	cca	gtg	tat	tgc	ttc	acc	ccg	agc		1536
Val	Pro	Ala	Ser	Gln	Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro	Ser		
			500					505					510				
cct	gtt	gtg	gtg	ggg	acg	acc	gat	cgg	ttt	ggg	gtc	ccc	acg	tat	aac		1584
Pro	Val	Val	Val	Gly	Thr	Thr	Asp	Arg	Phe	Gly	Val	Pro	Thr	Tyr	Asn		
			515				520					525					
tgg	ggg	gcg	aac	gac	tcg	gat	gtg	ctg	att	ctc	aac	aac	acg	cgg	ccg		1632
Trp	Gly	Ala	Asn	Asp	Ser	Asp	Val	Leu	Ile	Leu	Asn	Asn	Thr	Arg	Pro		
		530				535					540						
ccg	cga	ggc	aac	tgg	ttc	ggc	tgt	aca	tgg	atg	aac	ggc	act	ggg	ttc		1680
Pro	Arg	Gly	Asn	Trp	Phe	Gly	Cys	Thr	Trp	Met	Asn	Gly	Thr	Gly	Phe		
545					550				555						560		
acc	aag	acg	tgt	ggg	ggc	ccc	ccg	tgc	aac	atc	ggg	ggg	gcc	ggc	aac		1728
Thr	Lys	Thr	Cys	Gly	Gly	Pro	Pro	Cys	Asn	Ile	Gly	Gly	Ala	Gly	Asn		
				565					570					575			
aac	acc	ttg	acc	tgc	ccc	act	gac	tgt	ttt	cgg	aag	cac	ccc	gag	gcc		1776
Asn	Thr	Leu	Thr	Cys	Pro	Thr	Asp	Cys	Phe	Arg	Lys	His	Pro	Glu	Ala		
			580					585					590				
acc	tac	gcc	aga	tgc	ggg	tct	ggg	ccc	tgg	ctg	aca	cct	agg	tgt	atg		1824
Thr	Tyr	Ala	Arg	Cys	Gly	Ser	Gly	Pro	Trp	Leu	Thr	Pro	Arg	Cys	Met		
		595					600					605					
gtt	cat	tac	cca	tat	agg	ctc	tgg	cac	tac	ccc	tgc	act	gtc	aac	ttc		1872
Val	His	Tyr	Pro	Tyr	Arg	Leu	Trp	His	Tyr	Pro	Cys	Thr	Val	Asn	Phe		

610	615	620	
acc atc ttc aag gtt agg atg tac gtg ggg ggc gtg gag cac agg ttc			1920
Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Phe			
625	630	635	640
gaa gcc gca tgc aat tgg act cga gga gag cgt tgt gac ttg gag gac			1968
Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp			
	645	650	655
agg gat aga tca gag ctt agc ccg ctg ctg ctg tct aca aca gag tgg			2016
Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Glu Trp			
	660	665	670
cag ata ctg ccc tgt tcc ttc acc acc ctg ccg gcc cta tcc acc ggc			2064
Gln Ile Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly			
	675	680	685
ctg atc cac ctc cat cag aac atc gtg gac gtg caa tac ctg tac ggt			2112
Leu Ile His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly			
	690	695	700
gta ggg tcg gcg gtt gtc tcc ctt gtc atc aaa tgg gag tat gtc ctg			2160
Val Gly Ser Ala Val Val Ser Leu Val Ile Lys Trp Glu Tyr Val Leu			
	705	710	715
ttg ctc ttc ctt ctc ctg gca gac gcg cgc atc tgc gcc tgc tta tgg			2208
Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg Ile Cys Ala Cys Leu Trp			
	725	730	735
atg atg ctg ctg ata gct caa gct gag gcc gcc tta gag aac ctg gtg			2256
Met Met Leu Leu Ile Ala Gln Ala Glu Ala Ala Leu Glu Asn Leu Val			
	740	745	750
gtc ctc aat gcg gcg gcc gtg gcc ggg gcg cat ggc act ctt tcc ttc			2304
Val Leu Asn Ala Ala Val Ala Gly Ala His Gly Thr Leu Ser Phe			
	755	760	765
ctt gtg ttc ttc tgt gct gcc tgg tac atc aag ggc agg ctg gtc cct			2352
Leu Val Phe Phe Cys Ala Ala Trp Tyr Ile Lys Gly Arg Leu Val Pro			
	770	775	780
ggg ggc gca tac gcc ttc tat ggc gtg tgg ccg ctg ctc ctg ctt ctg			2400
Gly Ala Ala Tyr Ala Phe Tyr Gly Val Trp Pro Leu Leu Leu Leu Leu			
	785	790	795
ctg gcc tta cca cca cga gct tat gcc tagtaa			2433
Leu Ala Leu Pro Pro Arg Ala Tyr Ala			
	805		

<210> 50

<211> 809

<212> PRT

<213> Hepatitis C virus

<400> 50

Met	Ser	Thr	Asn	Pro	Lys	Pro	Gln	Arg	Lys	Thr	Lys	Arg	Asn	Thr	Asn	
1				5					10					15		
Arg	Arg	Pro	Gln	Asp	Val	Lys	Phe	Pro	Gly	Gly	Gly	Gln	Ile	Val	Gly	
			20					25					30			
Gly	Val	Tyr	Leu	Leu	Pro	Arg	Arg	Gly	Pro	Arg	Leu	Gly	Val	Arg	Ala	
		35					40					45				
Thr	Arg	Lys	Thr	Ser	Glu	Arg	Ser	Gln	Pro	Arg	Gly	Arg	Arg	Gln	Pro	
	50					55					60					
Ile	Pro	Lys	Ala	Arg	Arg	Pro	Glu	Gly	Arg	Ala	Trp	Ala	Gln	Pro	Gly	
65					70				75						80	
Tyr	Pro	Trp	Pro	Leu	Tyr	Gly	Asn	Glu	Gly	Met	Gly	Trp	Ala	Gly	Trp	
				85					90					95		
Leu	Leu	Ser	Pro	Arg	Gly	Ser	Arg	Pro	Ser	Trp	Gly	Pro	Thr	Asp	Pro	
			100					105					110			
Arg	Arg	Arg	Ser	Arg	Asn	Leu	Gly	Lys	Val	Ile	Asp	Thr	Leu	Thr	Cys	
		115					120				125					
Gly	Phe	Ala	Asp	Leu	Val	Gly	Tyr	Ile	Pro	Leu	Val	Gly	Ala	Pro	Leu	
	130					135					140					
Gly	Gly	Ala	Ala	Arg	Ala	Leu	Ala	His	Gly	Val	Arg	Val	Leu	Glu	Asp	
145					150					155					160	
Gly	Val	Asn	Tyr	Ala	Thr	Gly	Asn	Leu	Pro	Gly	Cys	Ser	Phe	Ser	Ile	
				165					170					175		
Phe	Leu	Leu	Ala	Leu	Leu	Ser	Cys	Leu	Thr	Val	Pro	Ala	Ser	Ala	Tyr	
			180					185					190			
Glu	Val	Arg	Asn	Val	Ser	Gly	Met	Tyr	His	Val	Thr	Asn	Asp	Cys	Ser	
		195					200					205				
Asn	Ser	Ser	Ile	Val	Tyr	Glu	Ala	Ala	Asp	Met	Ile	Met	His	Thr	Pro	
	210					215					220					
Gly	Cys	Val	Pro	Cys	Val	Arg	Glu	Asn	Asn	Ser	Ser	Arg	Cys	Trp	Val	
225					230					235					240	
Ala	Leu	Thr	Pro	Thr	Leu	Ala	Ala	Arg	Asn	Ala	Ser	Val	Pro	Thr	Thr	
				245					250					255		
Thr	Ile	Arg	Arg	His	Val	Asp	Leu	Leu	Val	Gly	Ala	Ala	Ala	Phe	Cys	
		260					265						270			
Ser	Ala	Met	Tyr	Val	Gly	Asp	Leu	Cys	Gly	Ser	Val	Phe	Leu	Val	Ser	
		275					280					285				
Gln	Leu	Phe	Thr	Ile	Ser	Pro	Arg	Arg	His	Glu	Thr	Val	Gln	Asp	Cys	
	290					295					300					

Asn	Cys	Ser	Ile	Tyr	Pro	Gly	His	Ile	Thr	Gly	His	Arg	Met	Ala	Trp	
305					310					315					320	
Asp	Met	Met	Met	Asn	Trp	Ser	Pro	Thr	Thr	Ala	Leu	Val	Val	Ser	Gln	
				325					330					335		
Leu	Leu	Arg	Ile	Pro	Gln	Ala	Val	Val	Asp	Met	Val	Ala	Gly	Ala	His	
			340					345					350			
Trp	Gly	Val	Leu	Ala	Gly	Leu	Ala	Tyr	Tyr	Ser	Met	Val	Gly	Asn	Trp	
		355					360					365				
Ala	Lys	Val	Leu	Val	Val	Met	Leu	Leu	Phe	Ala	Gly	Val	Asp	Gly	His	
	370					375					380					
Thr	Arg	Val	Ser	Gly	Gly	Ala	Ala	Ala	Ser	Asp	Thr	Arg	Gly	Leu	Val	
385					390					395					400	
Ser	Leu	Phe	Ser	Pro	Gly	Ser	Ala	Gln	Lys	Ile	Gln	Leu	Val	Asn	Thr	
				405					410					415		
Asn	Gly	Ser	Trp	His	Ile	Asn	Arg	Thr	Ala	Leu	Asn	Cys	Asn	Asp	Ser	
			420					425					430			
Leu	Gln	Thr	Gly	Phe	Phe	Ala	Ala	Leu	Phe	Tyr	Lys	His	Lys	Phe	Asn	
		435					440					445				
Ser	Ser	Gly	Cys	Pro	Glu	Arg	Leu	Ala	Ser	Cys	Arg	Ser	Ile	Asp	Lys	
	450					455					460					
Phe	Ala	Gln	Gly	Trp	Gly	Pro	Leu	Thr	Tyr	Thr	Glu	Pro	Asn	Ser	Ser	
465					470					475					480	
Asp	Gln	Arg	Pro	Tyr	Cys	Trp	His	Tyr	Ala	Pro	Arg	Pro	Cys	Gly	Ile	
				485					490					495		
Val	Pro	Ala	Ser	Gln	Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro	Ser	
			500					505					510			
Pro	Val	Val	Val	Gly	Thr	Thr	Asp	Arg	Phe	Gly	Val	Pro	Thr	Tyr	Asn	
		515					520					525				
Trp	Gly	Ala	Asn	Asp	Ser	Asp	Val	Leu	Ile	Leu	Asn	Asn	Thr	Arg	Pro	
	530					535					540					
Pro	Arg	Gly	Asn	Trp	Phe	Gly	Cys	Thr	Trp	Met	Asn	Gly	Thr	Gly	Phe	
545					550					555					560	
Thr	Lys	Thr	Cys	Gly	Gly	Pro	Pro	Cys	Asn	Ile	Gly	Gly	Ala	Gly	Asn	
				565					570					575		
Asn	Thr	Leu	Thr	Cys	Pro	Thr	Asp	Cys	Phe	Arg	Lys	His	Pro	Glu	Ala	
			580					585					590			
Thr	Tyr	Ala	Arg	Cys	Gly	Ser	Gly	Pro	Trp	Leu	Thr	Pro	Arg	Cys	Met	
		595					600					605				

Val His Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Val Asn Phe
 610 615 620
 Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg Phe
 625 630 635 640
 Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp
 645 650 655
 Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Glu Trp
 660 665 670
 Gln Ile Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly
 675 680 685
 Leu Ile His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly
 690 695 700
 Val Gly Ser Ala Val Val Ser Leu Val Ile Lys Trp Glu Tyr Val Leu
 705 710 715 720
 Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg Ile Cys Ala Cys Leu Trp
 725 730 735
 Met Met Leu Leu Ile Ala Gln Ala Glu Ala Ala Leu Glu Asn Leu Val
 740 745 750
 Val Leu Asn Ala Ala Ala Val Ala Gly Ala His Gly Thr Leu Ser Phe
 755 760 765
 Leu Val Phe Phe Cys Ala Ala Trp Tyr Ile Lys Gly Arg Leu Val Pro
 770 775 780
 Gly Ala Ala Tyr Ala Phe Tyr Gly Val Trp Pro Leu Leu Leu Leu Leu
 785 790 795 800
 Leu Ala Leu Pro Pro Arg Ala Tyr Ala
 805

<210> 51

<211> 17

<212> PRT

<213> Hepatitis C virus

<400> 51

Ser Asn Ser Ser Glu Ala Ala Asp Met Ile Met His Thr Pro Gly Cys
 1 5 10 15
 Val

<210> 52

<211> 22
<212> PRT
<213> Hepatitis C virus

<400> 52

Gly	Gly	Ile	Thr	Gly	His	Arg	Met	Ala	Trp	Asp	Met	Met	Met	Asn	Trp
1				5					10					15	
Ser	Pro	Thr	Thr	Ala	Leu										
				20											

<210> 53

<211> 37
<212> PRT
<213> Hepatitis C virus

<400> 53

Tyr	Glu	Val	Arg	Asn	Val	Ser	Gly	Ile	Tyr	His	Val	Thr	Asn	Asp	Cys
1				5					10					15	
Ser	Asn	Ser	Ser	Ile	Val	Tyr	Glu	Ala	Ala	Asp	Met	Ile	Met	His	Thr
				20				25						30	
Pro	Gly	Cys	Gly	Lys											
				35											

<210> 54

<211> 25
<212> PRT
<213> Hepatitis C virus

<400> 54

Gly	Gly	Thr	Pro	Thr	Val	Ala	Thr	Arg	Asp	Gly	Lys	Leu	Pro	Ala	Thr
1				5					10					15	
Gln	Leu	Arg	Arg	His	Ile	Asp	Leu	Leu							
				20				25							

<210> 55

<211> 25
<212> PRT
<213> Hepatitis C virus

<400> 55

Gly Gly Thr Pro Thr Leu Ala Ala Arg Asp Ala Ser Val Pro Thr Thr
1 5 10 15

Thr Ile Arg Arg His Val Asp Leu Leu
20 25

<210> 56

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 56

Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Gln Val Arg Asn
1 5 10 15

Ser Thr Gly Leu
20

<210> 57

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 57

Gln Val Arg Asn Ser Thr Gly Leu Tyr His Val Thr Asn Asp Cys Pro
1 5 10 15

Asn Ser Ser Ile
20

<210> 58

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 58

Asn Asp Cys Pro Asn Ser Ser Ile Val Tyr Glu Ala His Asp Ala Ile
1 5 10 15

Leu His Thr Pro
20

<210> 59

<211> 20

<212> PRT
<213> Hepatitis C virus

<400> 59

Ser Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Met Ile Met His Thr
1 5 10 15

Pro Gly Cys Val
20

<210> 60

```
<211> 19
<212> PRT
<213> Hepatitis C virus
```

<400> 60

His Asp Ala Ile Leu His Thr Pro Gly Val Pro Cys Val Arg Glu Gly
1 5 10 15
Asn Val Ser

<210> 61

```
<211> 20
<212> PRT
<213> Hepatitis C virus
```

<400> 61

Cys Val Arg Glu Gly Asn Val Ser Arg Cys Trp Val Ala Met Thr Pro
1 5 10 15
Thr Val Ala Thr
20

<210> 62

```
<211> 20
<212> PRT
<213> Hepatitis C virus
```

<400> 62

Ala Met Thr Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro Ala Thr
1 5 10 15
Gln Leu Arg Arg

20

<210> 63

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 63

Leu	Pro	Ala	Thr	Gln	Leu	Arg	Arg	His	Ile	Asp	Leu	Leu	Val	Gly	Ser
1				5					10					15	

Ala	Thr	Leu	Cys
			20

<210> 64

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 64

Leu	Val	Gly	Ser	Ala	Thr	Leu	Cys	Ser	Ala	Leu	Tyr	Val	Gly	Asp	Leu
1				5					10					15	

Cys	Gly	Ser	Val
			20

<210> 65

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 65

Gln	Leu	Phe	Thr	Phe	Ser	Pro	Arg	Arg	His	Trp	Thr	Thr	Gln	Gly	Cys
1				5					10					15	

Asn	Cys	Ser	Ile
			20

<210> 66

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 66

Thr	Gln	Gly	Cys	Asn	Cys	Ser	Ile	Tyr	Pro	Gly	His	Ile	Thr	Gly	His
1				5					10					15	

Arg	Met	Ala	Trp
			20

<210> 67

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 67

Ile	Thr	Gly	His	Arg	Met	Ala	Trp	Asp	Met	Met	Met	Asn	Trp	Ser	Pro
1				5					10					15	

Thr	Ala	Ala	Leu
			20

<210> 68

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 68

Asn	Trp	Ser	Pro	Thr	Ala	Ala	Leu	Val	Met	Ala	Gln	Leu	Leu	Arg	Ile
1				5					10					15	

Pro	Gln	Ala	Ile
			20

<210> 69

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 69

Leu	Leu	Arg	Ile	Pro	Gln	Ala	Ile	Leu	Asp	Met	Ile	Ala	Gly	Ala	His
1				5					10					15	

Trp	Gly	Val	Leu
			20

<210> 70

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 70

Ala	Gly	Ala	His	Trp	Gly	Val	Leu	Ala	Gly	Ile	Ala	Tyr	Phe	Ser	Met
1				5					10					15	
Val Gly Asn Met															
20															

<210> 71

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 71

Val	Val	Leu	Leu	Leu	Phe	Ala	Gly	Val	Asp	Ala	Glu	Thr	Ile	Val	Ser
1				5					10					15	
Gly Gly Gln Ala															
20															

<210> 72

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 72

Ser	Gly	Leu	Val	Ser	Leu	Phe	Thr	Pro	Gly	Ala	Lys	Gln	Asn	Ile	Gln
1				5					10					15	
Leu Ile Asn Thr															
20															

<210> 73

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 73

Gln Asn Ile Gln Leu Ile Asn Thr Asn Gly Gln Trp His Ile Asn Ser
1 5 10 15

Thr Ala Leu Asn
20

<210> 74

<211> 21

<212> PRT

<213> Hepatitis C virus

<400> 74

Leu Asn Cys Asn Glu Ser Leu Asn Thr Gly Trp Trp Leu Ala Gly Leu
1 5 10 15

Ile Tyr Gln His Lys
20

<210> 75

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 75

Ala Gly Leu Ile Tyr Gln His Lys Phe Asn Ser Ser Gly Cys Pro Glu
1 5 10 15

Arg Leu Ala Ser
20

<210> 76

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 76

Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Pro Leu Thr Asp Phe Asp
1 5 10 15

Gln Gly Trp Gly
20

<210> 77

<211> 20

<212> PRT
<213> Hepatitis C virus

<400> 77

Thr	Asp	Phe	Asp	Gln	Gly	Trp	Gly	Pro	Ile	Ser	Tyr	Ala	Asn	Gly	Ser
1				5					10					15	
Gly Pro Asp Gln															
20															

<210> 78

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 78

Ala	Asn	Gly	Ser	Gly	Pro	Asp	Gln	Arg	Pro	Tyr	Cys	Trp	His	Tyr	Pro
1				5					10					15	
Pro Lys Pro Cys															
20															

<210> 79

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 79

Trp	His	Tyr	Pro	Pro	Lys	Pro	Cys	Gly	Ile	Val	Pro	Ala	Lys	Ser	Val
1				5					10					15	
Cys Gly Pro Val															
20															

<210> 80

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 80

Ala	Lys	Ser	Val	Cys	Gly	Pro	Val	Tyr	Cys	Phe	Thr	Pro	Ser	Pro	Val
1				5					10					15	
Val Val Gly Thr															

20

<210> 81

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 81

Pro Ser Pro Val Val Val Gly Thr Thr Asp Arg Ser Gly Ala Pro Thr
1 5 10 15

Tyr Ser Trp Gly
20

<210> 82

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 82

Gly Ala Pro Thr Tyr Ser Trp Gly Glu Asn Asp Thr Asp Val Phe Val
1 5 10 15

Leu Asn Asn Thr
20

<210> 83

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 83

Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Ser Thr Gly Phe Thr Lys
1 5 10 15

Val Cys Gly Ala
20

<210> 84

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 84

Gly Phe Thr Lys Val Cys Gly Ala Pro Pro Val Cys Ile Gly Gly Ala
1 5 10 15

Gly Asn Asn Thr
20

<210> 85

<211> 19

<212> PRT

<213> Hepatitis C virus

<400> 85

Ile Gly Gly Ala Gly Asn Asn Thr Leu His Cys Pro Thr Asp Cys Arg
1 5 10 15

Lys His Pro

<210> 86

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 86

Thr Asp Cys Phe Arg Lys His Pro Asp Ala Thr Tyr Ser Arg Cys Gly
1 5 10 15

Ser Gly Pro Trp
20

<210> 87

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 87

Ser Arg Cys Gly Ser Gly Pro Trp Ile Thr Pro Arg Cys Leu Val Asp
1 5 10 15

Tyr Pro Tyr Arg
20

<210> 88

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 88

Cys Leu Val Asp Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Ile
1 5 10 15

Asn Tyr Thr Ile
20

<210> 89

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 89

Pro Cys Thr Ile Asn Tyr Thr Ile Phe Lys Ile Arg Met Tyr Val Gly
1 5 10 15

Gly Val Glu His
20

<210> 90

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 90

Met Tyr Val Gly Gly Val Glu His Arg Leu Glu Ala Ala Cys Asn Trp
1 5 10 15

Thr Pro Gly Glu
20

<210> 91

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 91

Ala Cys Asn Trp Thr Pro Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp
1 5 10 15

Arg Ser Glu Leu
20

<210> 92

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 92

Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu Thr Thr Thr
1 5 10 15

Gln Trp Gln Val
20

<210> 93

<211> 9

<212> PRT

<213> Hepatitis C virus

<400> 93

Tyr Gln Val Arg Asn Ser Thr Gly Leu
1 5

<210> 94

<211> 29

<212> DNA

<213> Hepatitis C virus

<220>

<221> misc_feature

<223>/note="antisense"

<400> 94

acgtccgtac gttcgaatta attaatcga

29

<210> 95

<211> 60

<212> DNA

<213> Hepatitis C virus

<220>

<221> misc_feature

<223>/note="antisense"

<400> 95

cctccggacg tgcactagct cccgtctgtg gtagtggtgg tagtgattat caattaattg 60

<210> 96

<211> 19

<212> DNA

<213> Hepatitis C virus

<400> 96

gtttaaccac tgcattgatg 19

<210> 97

<211> 20

<212> DNA

<213> Hepatitis C virus

<400> 97

gtcccatcga gtgcggctac 20

<210> 98

<211> 45

<212> DNA

<213> Hepatitis C virus

<400> 98

cgtgacatgg tacattccgg acacttggcg cacttcataa gcgga 45

<210> 99

<211> 42

<212> DNA

<213> Hepatitis C virus

<400> 99

tgccatcatc acaatggagc tctgggacga gtcgttcgtg ac 42

<210> 100

<211> 42

<212> DNA

<213> Hepatitis C virus

<400> 100

tacccagcag cgggagctct gttgctcccg aacgcagggc ac

42

<210> 101

<211> 42

<212> DNA

<213> Hepatitis C virus

<400> 101

tgtcgtgggtg gggacggagg cctgcctagc tgcgagcgtg gg

42

<210> 102

<211> 48

<212> DNA

<213> Hepatitis C virus

<400> 102

cgttatgtgg cccgggtaga ttgagcactg gcagtcctgc accgtctc

48

<210> 103

<211> 42

<212> DNA

<213> Hepatitis C virus

<400> 103

cagggccggtt ctaggcctcc actgcatcat catatcccaa gc

42

<210> 104

<211> 26

<212> DNA

<213> Hepatitis C virus

<400> 104

ccggaatgta ccatgtcacg aacgac

26

<210> 105

<211> 24

<212> DNA

<213> Hepatitis C virus

<400> 105
gctccattgt gtatgaggca gcgg 24

<210> 106

<211> 23
<212> DNA
<213> Hepatitis C virus

<400> 106
gagctcccg c tgctgggtag cgc 23

<210> 107

<211> 25
<212> DNA
<213> Hepatitis C virus

<400> 107
cctccgtccc caccacgaca atacg 25

<210> 108

<211> 27
<212> DNA
<213> Hepatitis C virus

<400> 108
ctacccgggc cacataacgg gtcaccg 27

<210> 109

<211> 24
<212> DNA
<213> Hepatitis C virus

<400> 109
ggaggcctac aacggccctg gtgg 24

<210> 110

<211> 22

<212> DNA
<213> Hepatitis C virus

<400> 110

ttctatcgat taaatagaat tc

22

<210> 111

<211> 23
<212> DNA
<213> Hepatitis C virus

<400> 111

gccatagct cacagccgat ccc

23

<210> 112

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 112

Tyr Glu Val Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys
1 5 10 15

Ser Asn Ser Ser
20

<210> 113

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 113

Thr Asn Asp Cys Ser Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp
1 5 10 15

Met Ile Met His Thr
20

<210> 114

<211> 20
<212> PRT
<213> Hepatitis C virus

<400> 114

Ala Ala Asp Met Ile Met His Thr Pro Gly Cys Val Pro Cys Val
1 5 10 15

Arg Glu Asn Asn Ser
20

<210> 115

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 115

Pro Cys Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Val Ala Leu
1 5 10 15

Thr Pro Thr Leu Ala
20

<210> 116

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 116

Val Ala Leu Thr Pro Thr Leu Ala Ala Arg Asn Ala Ser Val Pro
1 5 10 15

Thr Thr Thr Ile Arg
20

<210> 117

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 117

Ser Val Pro Thr Thr Thr Ile Arg Arg His Val Asp Leu Leu Val
1 5 10 15

Gly Ala Ala Ala Phe
20

<210> 118

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 118

Leu Leu Val Gly Ala Ala Ala Phe Cys Ser Ala Met Tyr Val Gly
1 5 10 15

Asp Leu Cys Gly Ser
20

<210> 119

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 119

Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Ser Gln Leu
1 5 10 15

Phe Thr Ile Ser Pro
20

<210> 120

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 120

Ser Gln Leu Phe Thr Ile Ser Pro Arg Arg His Glu Thr Val Gln
1 5 10 15

Asp Cys Asn Cys Ser
20

<210> 121

<211> 20

<212> PRT

<213> Hepatitis C virus

<400> 121

Thr Val Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr
1 5 10 15

Gly His Arg Met Ala
20

<210> 122

<211> 20

<212> PRT

<400> 122

His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met Asn Trp
1 5 10 15
Ser Pro Thr Thr Ala
20

ds

Set	Items	Description
S1	27459	HEPATITIS(W)C
S2	2881	CHIMP OR CHIMPANZEE
S3	223	S1 AND S2
S4	1009729	DT=REVIEW?
S5	18	S3 AND S4
S6	931878	MODEL OR MODELS
S7	46	S1 AND S2 AND S6
S8	37	S7 NOT S5
S9	37	Sort S8/ALL/PY
S10	2645	CHIMPS OR CHIMPANZEES
S11	169	S1 AND S10 NOT S3
S12	29	S4 AND S11
S13	25	S6 AND S11
S14	59	AU=MAERTENS G?
S15	45	S1 AND S14

? log hold

24may04 11:29:30 User208669 Session D2539.2

\$10.22 3.194 DialUnits File155

\$0.00 154 Type(s) in Format 6

\$5.46 26 Type(s) in Format 7

\$5.46 180 Types

\$15.68 Estimated cost File155

\$8.00 TELNET

\$23.68 Estimated cost this search

\$24.00 Estimated total session cost 3.285 DialUnits

Logoff: level 04.09.00 D 11:29:30